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L E C T U R E S,
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M A T E R I A M E D I C A,
A N T I E N T and M O D E R N.

Read in the Physick Schools at *CAMBRIDGE*, upon the Collections of Doctor *Attenbrook* and Signor *Vigani*, deposited in *Catharine-Hall*, and *Queen's-College*.

By *R. BRADLEY, F. R. S.*
And Professor of BOTANY in the University
of *CAMBRIDGE*.

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THIS
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ON THE
MATERIA MEDICA,

Is humbly Dedicated,
and Presented, by

Richard Bradley.

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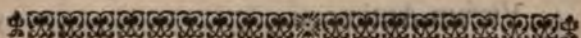
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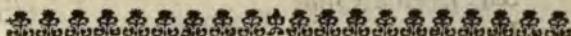
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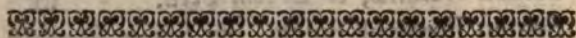
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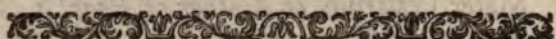
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Materia



INTRODUCTION.

Gentlemen,



S this is the first Course of Lectures that I have undertaken to read in this University, since I had the Honour of a Grace granted for my Professorship in Botany, I think it necessary, by way of Introduction, to acquaint the Gentlemen who favour me with their Company, that as Botany is esteem'd one of the principal Branches of Physick, so the Knowledge of it ought to be cultivated, as well as that of Anatomy and Chymistry, to compleat the Studies of those who intend to practise as Physicians.

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2 INTRODUCTION.

The Study of Botany has, however, for want of proper Encouragement, been neglected for many Years in both our Universities, and I fear has given Occasion for several *English* Gentlemen to seek that Branch of Knowledge in foreign Countries. The Physick-Garden at *Oxford*, though well design'd at first, has lain in a Manner useless for many Years, through the Want of a proper Income to support it; though at present it is to be hop'd it will recover its wonted Reputation, by the extraordinary Benefaction of Dr. *William Sherard*, late Consul at *Smyrna*, whose Skill in Botany was hardly equall'd by any in *Europe*. In the mean time, Gentlemen, I must acquaint you, that I have Directions from several of my Friends, who are Persons of Quality, and Honour, to find out a proper Piece of Ground in this University, to be purchased for a Physick-Garden, and put in such Order as may render it both useful and ornamental; and especially from two or three great Men, who give me the strongest Hopes of seeing the Design perfected.

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INTRODUCTION. 3

In Obedience to their Directions, I have visited the several Parts in and about the Town of *Cambridge*, in order to find out a proper Place for a Garden ; and have, at length, fix'd upon one, which, if the Gentlemen of the College it belongs to, will consent to part with upon reasonable Terms, will in all Probability be purchased, and secured to the University by Act of Parliament ; and as soon as that can be done, I can assure you of a good Collection of Plants from my self and some others, who are resolved to set it on Foot, as well as may be, for the Service and Honour of the University. Nor am I without Hopes that a worthy Gentleman of this County will contribute very largely on that Occasion.

When we shall have the Happiness of seeing a Garden in this State, it is my Design to bring the Study of Botany into an easy Order, by planting all the Officials alphabetically, and draw up a Catalogue accordingly, referring to each of them.

This Method will give every Gentleman an Opportunity of examining each respec-

tive Plant at his own Leisure, without interrupting his other Studies, and of observing the various Changes of each Plant, from its first springing out of the Ground, to the ripening of its Seed; which will be the surest Way to make them Masters of the useful Part of Botany, without perplexing them (who purely design the Study of Physick) with a Crowd of Varieties, that have long since been rejected as useless, by the College of Physicians.

And that there may be Room for the Curious to indulge themselves in the more extensive Parts of Botany, it is beyond Doubt, whenever such a Garden is set on Foot, there will not be wanting any Sort of rare Plant that can be gather'd from the nicest Collections in *Europe*.

Thus far, Gentlemen, we have Room to hope that this University will very soon rejoice in a Garden becoming its Worth and Grandeur: And I shall not be a little proud in promoting so good a Design; but in the mean while I take Occasion to treat of the several Parts of Plants, Minerals,
and

INTRODUCTION.

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and other Bodies, as are principally used in the Shops. For as there has been no one who has read of, or explain'd them, it is necessary to know their several Particulars and their Uses, while the Gardens are in their Winter-Dress.

Nor does this at all break through my Botanical Lecture, since the Mineral, Vegetable, and Animal Kingdoms, are harmonious to one another. The Mineral Bodies are assistant to the Vegetable Bodies, as well as the Vegetable to the Mineral; and the Vegetables are likewise assistant to the Animals, as the Animals are to the Vegetables.

We have many Instances how much the same Vegetable will prosper or decline, as the Soil happens to be more or less favourable; and the same is the Case between the Vegetable and Animal Bodies: For an Animal, as it finds Vegetables proper for its Nourishment, more or less, will be more or less improv'd; and Experience teaches us, that the Juices of Animals are always helpful to Vegetables: For if we lay the Flesh of

an Animal, or the Soil deriv'd from it, to the Root of a sickly Plant, it will certainly promote its Growth.

It is remarkable, however, in the first Place, that Earths are not always immediately affording proper Nourishment to Vegetable Bodies, as in the Case of the Viscus or Mistletoe, the Mosses, Dodder, and other Vegetable Bodies, which will only grow upon the Plants themselves, and never in the pure Earth: For all these feed, or are nourish'd by the excrementitious Juices of the Plants they grow upon; and it may be, that they do not in a little partake of the Virtues of the respective Plants where we find them.

Sir *John Colebatch*, who has wrote a Tract relating to the Mistletoe, and its Use in Epileptic Cases, did not in his last Edition lay any Stress upon the *Viscus Quercinus*, or *Viscum Quercinum*, more than that growing on another Tree; because, as I had observ'd to him, every Plant, growing in whatever Soil it happen'd to be plac'd, would

would retain its same Quality, though in more or less Quantity.

For when we examine the Case of inoculating or graffing of Fruits, the favourite Fruit, which we put upon the most sour Crab, when it has taken or adher'd to that Stock, notwithstanding the unpleasant Sharpness of the Stock, the Fruit which proceeds from the Graff or Bud, will be the same it was before, unless perhaps the Crab has a more than ordinary, or less Agreeableness to it; and then it is likely we shall have the Fruit in a smaller Bulk, but yet possess'd of the same Quality. So do I reckon all Herbs or Vegetables, whatever, to preserve their Virtues in every Kind of Soil, excepting only that we might use them in greater or lesser Quantity, the more or less they are restrain'd in their Nourishment.

By this one may see, how much Earths of different Kinds may act upon Vegetables, with regard to their Powers; and so it may be said, that Animals, which feed upon Vegetables, may be understood as we have mention'd above, concerning Vegeta-

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bles feeding upon Earths, or Mineral Bodies.

We have Animals which are terrestrial, aquatick, and volatile; and all these have different Kinds of Food necessary or agreeable to the different and various Structure or Frame of their Bodies.

There are the carnivorous, such as the Quadruped, which have *Dentes serratos*; as the Lion, Tiger, Fox. *Secondly*, The granivorous, which live upon Seeds, as many Sorts of Birds. Others there are which live upon Fish and Herbs; as the Crocodile, Hippopotamus, Otter, and some others.

But we may yet distinguish a little further concerning Animals and their several Sorts of Foods. We may observe, that those that generally sleep in the Winter Season, such as the Cookoo, Swallow, Urchin, or Hedgehog, the Bat, or Flitter-Mouse, commonly feed upon Grain or Insects.

I have oftentimes brought the Urchin, Bat, Tortoise, and some other sleeping Animals, before the Fire in the Winter Season,
and

and as soon as the Warmth of the Fire had sufficiently reach'd their Bodies, they were in Motion, though before that Time they have been esteem'd as dead Creatures: And some of them, the Bat especially, when I first took it, had hardly its common Shape.

Wormius observes, that in *Denmark*, in boggy Places, the Swallows bury themselves deep in the Mud at the Approach of Winter, to defend themselves from the Frost; and several Insects of the Beetle-kind do the same with us. We have heard that the Swallow is a Bird of Passage from us about *October*, to some other Part of the World, and I am apt to judge that it is so; because I have several Times observ'd, that in the Month of *October*, about the Aits or Twig Grounds in the River *Thames*, near *Wandsworth*, *Isleworth*, and Places thereabout, the Swallows have gather'd in large Bodies, and were all lost or departed from thence in a Day's Time; I suppose somewhat like the Storks in *Holland*, who gather themselves into a Body about *Harlemmere* at the same Season, till they are all collected, and then
in

10 INTRODUCTION.

an Hour's Time disappear till the following Spring, when we have them all return on the same Day.

These, whether we speak of Minerals, Vegetables, or Animals, have all a Dependency upon one another; and even Man himself, as noble as he is, is depending on them, and makes, as well as those, a Part of the *Materia Medica*; of him, as well as them, we use the Blood, Fat, Urine, and Skull.

I shall conclude this Lecture with observing, that, as an introductory Discourse, I have branch'd out some Particulars, which may lead to the better understanding of the next, which will relate to Minerals, and the Use they are of in Physick.



M A T E-



Materia Medica.

Omnia Sublunaria sunt Objecta Medicinæ.



HERE is not one Object in our Globe, but is necessary to be known to Physicians; for every Thing we see, carries its Use with it, with regard to Medicine: It is, however, thought by Practitioners convenient to bring Physick into a much narrower Compass than it has been heretofore; and that the Memory might not be too much troubled, nor the Apothecaries Shops crowded with too many Things of the same Virtues, many

ny of which perhaps might lie stale on their Hands, the *College of Physicians* were led to fling out several within a few Years last past.

There are some of these cannot always be had; and it may be, that a Physician will not in six Years call or write an Order for many scarce Things till they have lost their Virtue. For this Reason, they have appointed proper Substitutes to those which were esteem'd difficult to be had, and were not of long Duration, as one may see in the *College Dispensatory*, lately publish'd.

The several Subjects there mention'd, are what I shall chiefly insist upon, in explaining the following Lectures, and mention by the By the superstitious Uses of some Ingredients that the learned Physicians of our Time have thought fit to fling out, the Precious Stones especially.

We may divide the *Materia Medica* into three Parts; viz. the Mineral, Vegetable, and Animal; and these again may be subdivided into different Classes.

of



Of MINERALS.



UNDER the Head of *Minerals*, are to be consider'd, *First*, The six fix'd Metals, viz. *Gold*, *Silver*, *Copper*, *Lead*, *Iron*, *Tin*; and *Mercury* is also number'd among the Metals, by the Alchymists, that they may equal the Number of Planets, whose Names they have given them; as *Sol* for *Gold*; *Luna* for *Silver*; *Venus* for *Copper*; *Saturn* for *Lead*; *Mars* for *Iron*; *Jupiter* for *Tin*; and *Mercury* for *Quicksilver*: They supposing that every one of these Metals carried some Resemblance with them of the Characters they have given them.

The Chymists at this Day, as well as the Physicians, write for them under the several Denominations of the Planets, which they are said to be like. Nothing, however,

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ever, ought to be esteem'd a perfect Metal, but what is ductile; and therefore *Mercury* is by some esteem'd an imperfect one.

There are also imperfect Minerals, which have a Body metallic, though with so much Dross and Impurity intermix'd, that it is not worth while to work upon them.

The Elector of *Saxony*, who is at present King of *Poland*, has in his *Museum* a white Stone like Marble, out of which, *Silver*, to the Weight of four Ounces, appears to drop, as Gums do from Trees: We find likewise, of the same Stone, in the *Museum* of Sir *Hans Sloane*, that of *Edward Lisle*, Esq; and in the publick Library of this University. These Stones are call'd, *Marchasites* of Silver.

There is likewise a *Marchasite* of Gold, which is also like white Marble, wherein Gold appears to drop, or spread it self in Branches. We have of this Sort, in that extraordinary Collection purchased by this University, from the Executors of the late ingenious Dr. *Woodward*, and likewise some Pieces of it lately sent us from *Mexico* and
Peru,

Materia Medica. 15

Peru, which are also deposited in the University Library: And there are some Specimens, also, in the Collection of *Materia Medica*, by Signore *Vigani*, which are now in *Queen's College*, under the Care of the Reverend Dr. *Davis*, the present Master, to whom my self, and the Gentlemen here present, are oblig'd for the Sight and Perusal of them. But in these last I find some Veins of blue, such as are equal in Quantity to those in *Lapis Lazuli*. However, the true *Lapis Lazuli* abounds more in the fine blue Colour, than in Gold Veins. Both these Sorts are in the Collections of the University Library, and in *Queen's College*. What we find in this Way, is call'd *native*, or *virgin* Silver or Gold.

But the Gold which is brought to us from *Guinea*, we receive in Grains somewhat cubical; these are found amongst the Sands, by the Sides of Rivers, which Rivers passing through the golden Rocks or Mines, carry the Gold along with their Stream.

Gold

Gold is sometimes found in that Part of *Africa*, when they dig their Ground, but not always in a *Marchasite*.

Again, we may take Notice, that in *Hungary*, where there are rich Gold Mines, a-bundance of *Antimony* is found, which has made some suspect that Antimony was the *Marchasite* of Gold. This has occasioned some Alchymists to endeavour to extract Gold from it, but with great Loss of Time, and no Profit.

We are told, that in the River which passes through the Kingdom of *Granada*, and empties it self into the *Mediterranean Sea*, there is found great Quantities of mineral Gold, three Ounces of which, will yield two Ounces of pure Gold: This is said to be much richer than the *Hungarian*.

About *Peru* and *Mexico*, in the *West-Indies*, Gold is found in the same Manner wash'd by the Rivers from Rocks.

'Tis certain, the old *Romans* had their Gold from *Spain*; and the Gold which was used in *Solomon's* Temple, as Signore
Vigani

Vigani would have it, was fetch'd from thence; for he supposes the People of those Times being little skill'd in Navigation, could fetch it from no other Place. The same Signore *Vigani* endeavours to prove Gold to be a Vegetable in the Earth, and that like a Tree it has a Trunk, Root, Boughs, &c. In his own Words I give it, *viz.* Whether it is not like a Coal-Mine, which begins, like a little Plant, to spread it self, and by Degrees increases, and extends it self into Branches; so that, as some of the Colliers have informed him, one of these Rudiments of a Coal-Mine, in twenty Years, will grow from a small Point, to be as big as a Man's Arm; from this, he observes, that various other Fibres proceed, and spread themselves like the Branches of a Tree.

This Opinion, however, I am not satisfied with; although he tells us the same is observ'd in Lead, and other Metals.

What I have before related concerning Marchasites of Gold and Silver, seems to be on his Side; but when we consider that

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each

each of these Metals are found in Mines, as well as in Marchasites, this Opinion is not satisfactory; and I am rather inclined to think, that where we find Mines of any Sort, of Coal in particular, Lead, Iron, &c. we shall not be able to trace them to a Point, so minute as Signore *Vigani* has allotted them.

L E A D.

THE Marchasite of *Lead*, or *Saturn*, is call'd *Spar*, and there are no Lead Mines without it; and the more this abounds, the Mine is esteem'd so much the richer.

Some are apt to conjecture, that the Spar is an unripe Mineral. The Spar, however, seems to abound in Sulphur, which occasions it to fly in the Fire.

Besides the common Use of Lead, we have Preparations of it in Physick; the first called *Ceruse* and *Sandyx*, which is White Lead; another Preparation call'd *Minium*, or *Plumbum Rubrum*, or Red Lead:

Lead: We have also, the Litharge, call'd *Lithargyrus*, as it is produced by refining Silver with Lead.

C O P P E R.

C*uprum*, or *Copper*, is a Metal plentifully found in Mines in *Great-Britain*. We have it, likewise, in great Abundance, brought to us from *Norway* and *Sweden*. The latter has been esteem'd to be the richer; but we have now Mines of Copper in *Wales*, from which more Silver is produc'd. Quantity for Quantity, than from the *Swedish* Copper.

From Copper, we make *Æs*, or *Brass*, by adding the *Lapis Calaminaris* to it.

We have likewise Verdigreale from this Metal, call'd *Ærugo*, and *Æs Viride Offic.* which is made of Copper and an Acid.

I R O N.

IRon, or *Ferrum Nativum*, is found in many Parts of *England*, as well as in *Norway* or *Sweden*. 'Tis made Steel by heating it often in the Fire, and extinguishing it immediately in Water at every Heat, which renders it more solid and compact; and then it is call'd *Chalybs*, or *Steel*. But as far as it relates to Physick, the Infusion of it does not seem to carry with it more Virtue than the common Iron, We may see the Method of refining and forging Iron in the *Philos. Trans.* No 137.

It is remarkable in the Dross of Iron, which appears like a Cinder almost vitrified, that after it has been some Time expos'd to the Air and broken into small Parts, a great deal of Iron may be then extracted from it, as I have found by Experience. But hitherto I do not know any of the Workers in the Iron Forges or Furnaces, that understand any thing of it.

I have

I have made several Experiments in this Way, which may prove serviceable to such as deal in Mines of that Sort.

Take of the Cinders or Drofs of Iron, and beat them well, till they are reduc'd to a fine Powder; apply then the Magnet, or Loadstone, to that Powder, and such of the Parts as are pure Iron, will adhere to it; brush those off, and apply the Loadstone again to the Powder, turning the Powder every Time, till we find no more Iron adhere to the Stone.

In a Pound of this Glafs so beat, I have collected near six Ounces of Iron by this Means; but commonly it answers about four Ounces to the Pound; which is so much Loss to the Proprietor; but might be well enough saved, if there was more Care taken in the fluxing of it at first.

T I N.

TIN, or *Stannum Officinale*, is a bright Metal, resembling Silver; and indeed contains a great deal of Silver in it, and sometimes Gold, though in a small Quantity, as Dr. *Merret* relates in his *Pinax*. It is supposed, that it is unripe Silver, which in some Ages would become perfect; and some imagine that it was at first Mercury, or Quicksilver, which by Length of Time in the Mine, has fix'd it self. It is harder than Lead, and more Silver may be got out of it, if we try it Quantity for Quantity with Lead.

QUICKSILVER.

Quicksilver, or Mercury, or *Argentum Vivum*, is a Liquid Mineral Body; of which we have two Sorts; one call'd *Virgin Mercury*, because in splitting the Rock or Stone from which Mercury is
distill'd

distill'd (which Stone is known by the Name of *Cinnabar*) some of the Mercury will run from the Vein, into the Cavities of the Rock, which is therefore call'd *virgin*, because it never suffers the Fire, as the other does, which is made after this Manner, *viz.* by grinding the *Cinnabar*, and putting it, so ground, into an Iron Retort, and applying to the Retort a great Stone Receiver half full of Water; then, by the Force of the Fire, the Quicksilver rises in Vapours, and being condensed by the Water, falls to the Bottom in that Form we see it.

In several Places of *Europe*, we find great Quantities of *Mercury*, especially in *Spain*, near *Corduba*, where there is a plentiful Mine, which is of great Use to the *Spaniards*, in separating their Silver from the Dross, which is done by *Amalgamation*. A *Spanish* Author tells us, that before he taught them the Use of Quicksilver, they had no other Method of separating their Silver, but by Fusion only; and that he himself, with the Help of Quicksilver, got out of the Dross

so much Silver as amounted to twenty Thousand Pound Sterling.

Though there is Quicksilver in *America*, yet they have not enough for their Use; so the *Spaniards* ballast their Galleons with the Quicksilver of their own Countrey, which they tie up in Bladders, which Bladders they buy of the *English* and *Dutch* Merchants.

I cannot imagine what was the Occasion that *Lemery* had Thoughts of making a Sublimate of Mercury and Sulphur, which when finish'd, we call *Cinnabaris Offic.* only to make it more commodious for Transportation. When this Cinnabar is in *America*, they distil the Mercury again from the Cinnabar, as we do from the Mineral Stone at the first. This would be so laborious, as well as expensive, that it would by no Means answer the Design: But the Merchants understand better, and transport it after the aforesaid Manner. Mercury abounds very much in the *Hungarian* Mines, which the late Emperor being in great Want of Money pawn'd to the *Dutch* for a certain

a certain Term of Years, which rais'd the Price from Three Shillings and Six-pence a Pound, to Eight Shillings and Six-pence. But lately we have had some brought from *China*, excellent good, and far exceeding the *European*; which has lower'd the Price. The best of all we have from *Persia*. The purer the Cinnabar is, the purer also is the Mercury. In some Mines you will find the Mercury mix'd with Arsenick, Orpiment, and other impure Mineral Bodies, which impure Bodies are not found mix'd with the *Persian* Cinnabar.

Take twelve Ounces of fine *Persian* Cinnabar, well pulveriz'd, and mingled with twenty four Ounces of *Sal Tartarum* pulveriz'd also, which *Sal Tartarum* must be dissolv'd in Water, filtrated and evaporated *ad siccitatem*, to clean it from all terrestrious Bodies, which may be mingled with it, otherwise you will be deceiv'd in the Experiment: Put this Powder into a proportionable Retort, that the Powder may fill only the fourth Part of it, which Rule is commonly observ'd in other Experiments,
but

but 'tis not universal: Place your Retort in a Calot, on a Furnace, and so by Degrees begin your Distillation. You will perceive your Mercury ascend in Vapours; when the Vapours begin to ascend, keep an exact moderate Fire, else you will endanger your Glasses; and if at last you must raise your Fire, you must do it gradually, the Necessity of which, you will perceive by the slow Ascent of the Vapours: When this Distillation is over, which you will perceive by the Vapours not rising at all, you will find in your Receiver ten Ounces of pure Mercury distill'd from the twelve Ounces of Cinnabar before-mention'd.

This Mercury exceeds all other for the Barometer, by reason of its Purity; for tho' all Mercury grows thick and impure by losing its more volatile Parts, yet this will last much longer than any other.

If you put luke-warm Water in your Retort, and shake it a little, and then let it settle, the Water will dissolve your *Sal Tartarum*, and the Sulphur will precipitate: Decant gently the Water impregnated, with
Alcalick

Alcalick Salt, and put fresh warm Water on the Sulphur; shake it, let it settle, then decant it; repeat this Operation three or four Times, till the Sulphur isedulcorated: This Sulphur, though it is not used either through Ignorance, or because it is dear, is doubtless an excellent Medicine; for it is Sulphur *fixum, maturumque*; and the good Effects of *Persian* Cinnabar in the Epilepsy, are attributed to the Sulphur, more than to the Mercury.

Mercury is seldom used internally, except in the Distemper call'd *Miserere mei*, which is an Inversion of the peristaltick Motion of the Guts. In this Case the Patient takes three or four Pounds of Mercury, which extending the Intestines, often cures; proper corroborating Medicines being afterwards applied; as the *Elixir Vitrioli*, *Mynsiethi*, &c. Sometimes the Mercury runs through by its own Weight and Activity, without any Effect. There is no Remedy yet found out, but that of large Shot, taken after the same Manner; and if this fails, the Patient certainly dies. Crude Mercury is
given

given in no other Disease, except the *Morbus Gallicus*.

Take four Ounces of Mercury, six Ounces of common Turpentine; put them into a Mortar, and stir them with a wooden Pestle; the Mercury will be divided *per Minimas*, and so incorporated with the Turpentine, that it cannot be seen, which the Vulgar call *Mercurium extinctum*: Then take five Ounces of Antimony finely powder'd, four Ounces of *Coloquintida* powder'd also; mix them altogether in the same Mortar, in a *massa Pilulari*. The Dose is Half a Drachm every three Days.

Antimonium Officinarium.

THIS is a Metal in Substance solid, ponderous, friable, of a lead Colour, consisting of long and splendent Rays. We receive this from the Mines from *Hungary*, *Transylvania*, and several Parts in *England*. It is allow'd by Authors to be only a base or imperfect Metal: It has in it the Quality of *Mercury*, as far as distributing its Powers,

Powers without losing of its Weight; for when either Antimony or Mercury are infused in any Liquids, they communicate their Virtues in such a Manner to the Liquids, that they severally possess their Qualities; and though the same Trial be made upon either of them for many Thousand Times, neither Mercury nor the Antimony we use, become of less Weight than they were before.

Antimony and Mercury seem to possess the same Powers of the *Porcupine* Stones in *King's-College* Treasury, given to that Society by Sir *Thomas Page* their Provost; these Stones are a little rough on the outside, and within somewhat flinty. He tells us in his Memorandum, that if we infuse one of them in a Pint of Water or Ale for a few Hours, the Water impregnated by its Virtues, will cure an Intermitting Fever; as the Water wherein crude Mercury has been boiled, is a certain Remedy in Distempers on the Skin, when 'tis applied warm to the Parts affected. So Antimony, especially the *Regulus*, of which we make the antimonial Cup,

Cup, the Wine or any other potable Liquor, wherein either the Antimony is put or infused, will produce an Emetick Liquor, more or less powerful, as the Antimony has more or less Time to communicate its Virtues to it.

We must take Notice that where we have a Necessity of infusing the Parts of Vegetables, such as the *Ipecacuanha*, or the like, their Strength is more or less violent, as we allow Time for their Infusion; so is the Antimonial Infusion so much the stronger by an Hour or more, as we happen to leave the Liquid upon it.

With Regard to Antimony, some Authors will have us believe that it indicates Gold in the same Place where it is found, as *Sparr* is said to denote Lead. And some Alchymists have endeavoured to extract Gold from Antimony; and the Empiricks of our Days have therefore upon their Footing endeavoured to impose upon us a Preparation of Gold with Antimony, as if the two could be conjoyn'd; but by many Instances the contrary may be proved, as the
worthy

worthy Mr. *Mickeborough*, Professor of Chymistry in our University, may more particularly inform you. And it is to be hoped, Gentlemen, that every Professor in their several Branches of Physick, will take their proper Opportunities of reading to you, and explaining the several Parts of their Knowledge, that we may not want any Thing among us which is necessary to confirm that Character which has always been given to *Cambridge* and *Oxford*.

If you will yet give me Leave to make a further Excursion, I would say that I fear the want of these Lectures publicly, has occasioned many to seek them abroad, and fly to Foreign Universities for that Knowledge which we might gain at home.

The several Preparations of Antimony are so various, that it would confound the Memory of any Gentleman here present to repeat them all; but for those which are immediately in Use, I shall, as far as my Part relates to these Schools, mention them.

The pure or Virgin Antimony I have already described, and next to that is the *Regulus*

gulus Antimonii, or Regulus of Antimony, the making of which we are referred to the worthy Gentleman who has the Direction of our Laboratory. *En passant*, however, I may observe that it consists of Antimony, Tartar, and Nitre, powder'd and well mix'd; then put into a Crucible that is red hot by small Degrees, till the Whole is in Fusion; then let it remain till it flings out ten Sparks.

We take it after this and pour it into a Mortar which hath been well cleaned, and heated and greased with Butter or Tallow; and when it is cold turn it out. The *Scoria* should be put by in a glaz'd Earthen Pan, of which is made the *Sulphur Auratum*; to rectifie the *Regulus Antimonii* it passes the Process, excepting only that we add more Nitre to it in the second Operation.

After the *Regulus Antimonii* is made, the *Scoria* of that contributes to make what we call the *Sulphur Auratum Antimonii*, or Gold Sulphur of Antimony, which is done by boyling the *Scoria* of the *Regulus* in about eighteen or twenty Times its Weight
of

of pure Water, stirring it for an Hour, and while it is hot pass it through a fine Sieve or Straining-Cloth; then add to it distilled Vinegar, and a red Powder will precipitate: When this Powder is well settled, add a little more distilled Vinegar, and if the clear Liquor should be disturbed by it, let it settle, and gently pour in more Vinegar till the Liquor remains clear; it may then be washed with warm Water till the Smell and Taste have abandoned it; after this filter it, and last of all when it is free from the Liquid, dry it in an Earthen glazed Dish.

This is Emetick and Cathartick, while the foregoing has for the most Part an Emetick Quality only; in this, meaning the *Sulphur Auratum Antimonii*, one may give from one to six or seven Grains for a Dose. The Operation of the first has almost the same Effect as the *Crocus Metallorum*.

The next Preparation of Antimony is called *Regulus Antimonii Martialis*, or Regulus of Antimony with Iron or Steel; it is made of common Nails or any old Iron, in small Pieces, put into a large Crucible, placed upon a thin Brick in a melting Furnace, that

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it may receive the Fire gradually, till the Iron is ready to melt; then sling in, by a little at a Time, your Antimony, with a fourth Part of Nitre, and about an eighth Part of Tartar, well powdered and mixed together; your Crucible must then be covered with Charcole, and the Door of the Furnace shut close till the Fusion is so strong, that no more Sparks arise from the Body; we are then to take it from the Fire, and pour it into an Iron Mortar, buttered, greased and warmed as we have mentioned before.

When it is cold, we may take off the *Scoria*, and melt it a second Time, adding by little and little some Nitre powdered, while it stands in Fusion, taking Care that we do not move it from the Fire till it has done sparkling. Put this then in a warm Mortar as before, and repeat the same Operation once or twice more, still adding more Nitre to it by gentle Degrees; and when it is cold, and we have beat off the *Scoria* from it, we shall perceive the *Regulus* to distribute its Rays as from a Center

This its first Operation is less powerful than the former, seldom proving an Emetick.

Vitrum

Vitrum Antimonii, or the Glafs of Antimony, which is made by reducing Antimony into a fine Powder, and setting it over a gentle Fire in an unglafed Pan till its Fumes have abandoned it; but it muft be stirred all the Time to prevent its running into Lumps. When the Antimony is calcin'd, it is put into a Crucible and fet in a Wind-Furnace, with a Tile underneath, and one on the Top, till it is brought into a ftrong Fufion by Charcoal around it and over it; it will bear a Fire then of an Hour, and by putting in then a Rod of Iron, we may discover when it is transparent; and when we perceive that, pour it upon a hot and even Face of Marble, which will give us the Glafs of Antimony which is called *Stibium*, and is the ftrongeft Emetick prepared from Antimony. However it has been allowed to give this, as far as eight or nine Grains in a Dofe, I think it too harfh for any Conftitution.

Another Preparation of Antimony is called *Crocus Metallorum*, or Saffron of Metals; it is compofed of Antimony, Nitre,

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and common Salt. In its Operation it is Emetick by infusing it in white Wine; it is called in the Shops *Vinum Benedictum*. The Preparation is about one Ounce of *Crocus* to a Quart of Wine, and the Dose about two or three Drams, or even as far as an Ounce to strong Constitutions; but all the Preparations of Antimony are very rough, and require a skilful Physician to distribute them. They are however excellent in their Use.

The next is *Antimonium Diaphoreticum*, or the Diaphoretick Antimony, which is made of Antimony and Nitre, as the Professor of Chymistry will shew you; this is a Diaphoretick, and should be kept close from the Air; for if the Particles of Nitre mix with the Air, it will render it an Emetick. It is sometimes given with Alexipharmicks in Venereal and Scorbutick Cases, for it is accounted a great Cleanser of the Blood, and it is without doubt used by many Empiricks in those Cases.

There is a Tincture made of this, which is very Diuretick and Sudorifick, and esteemed

steemed to be good in most Chronical Distempers.

The *Cerussa Antimonii* is another Preparation made of the Regulus of Antimony, and Spirit of Nitre; its Use is Diaphoretick, and, according to some Authors, is said to equal the *Bezoar Mineral* in its Virtues; the Dose of this seldom exceeds a Dram.

The Magistery of Antimony is composed of Antimony and *Aqua Regis*; its Operation is Diaphoretick, and, like the former Preparations of Antimony, is supposed by the late Mr. *Wilson* to be good in Venereal Cases, or even to assist in the Gout.

Antimonium Catharticum, is composed of the Glass of Antimony and Oil of Vitriol; it is Cathartick, and may be given to a Patient without Difficulty in any Chronick Case; and is frequently now prescribed by the most able Physicians in the most inveterate Poxes.

Flores Antimonii, or Flowers of Antimony, which are prepared by subliming Pots: This Preparation of Antimony seems to discover the most active Salts and Sulphur that

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is in Antimony; its Quality is Emetick, but with so much Violence, that it must be given with great Caution.

Butyrum Antimonii, Butter of Antimony, is made of Antimony and Sublimate in equal Proportions; these will produce both a Butter and a Cinnabar; the Butter is only used as a Costick externally, and we seldom find this Sort of Cinnabar in the Shops.

We have yet the *Cinnabar Antimonii* made with crude Mercury, common Sulphur, and Antimony. This Cinnabar is not so strong as the former.

Bismuthum, or Bismuth, is by some Authors supposed to be a sulphureous Marchasite; or, as Doctor Quincy says, a Recrement of Metal: It is supposed that the Bismuth is loaded with Tin, and for that Reason some People call it Tin-Glass; it seems to be equal to the Sparr of Lead, and according to our modern Philosophers, nourishes the Metal where 'tis found. They use this in making Mirrors or Looking-Glasses, without taking the Trouble of Tin and Mercury, as is generally done in the Shops.

Shops. We have of late seen many Instances of it in Saltcellars which have been commonly sold, and other Glass Toys of the like Kind. The *Germans* first introduced this among us, and have given us some diverting Fancies in this Way in Looking-Glasses, &c.

We have a factitious Sort made of Tin, Tartar, and Arsenick, which sometimes we find in the Shops, and is a proper Substitute to the *Bismuthum*. To describe it, it is bright and brittle, and will break in large Flakes like the *Regulus Martis*, and is as ponderous as Gold: Of this are made the *Flores Bismuthi*, which come from the Bismuth finely powdered, and Nitre. The Use of these are as a *Fucus* mixed with Pomatum, but is not properly in Use, unless the nitrous or arsenic Salts are washed away by frequently applying warm Water to it. Some Authors reckon it a good Diaphoretick, but there are enough without it.

The Magistery of Bismuth is prepared of Bismuth or Tin-Glass, with Spirit of Nitre made with Oil of Vitriol, and common

D 4 Water

Water with a little Marine Salt. This is used as a Cosmetick, but it ought by no Means to be used while 'tis warm, for the Fumes are noxious.

Lithargyrus Auri, or Litharge of Gold; so called from its Colour, though it arises in the Purification of Silver, and therefore should rather be called Litharge of Silver: Its Use is in Emplasters, it dissolves being boyl'd in Oyl, and gives it a proper Consistence in the *Diacbylum*; 'tis cooling, and gives a Tenfity to the Parts on which it is applied; it is reckoned a Repellent.

Cuprum, or Copper. affords us only two or three Preparations that are of some Use. The *Ærugo Æris*, or Verdigrease is one; this is only the Rust of Copper made by the Corrosion of an Acid, such as one may press from unripe Grapes, or of Verjuice made of Crabs. The best comes from *France*, it produces the gayest green Colour, but not durable in Painting unless well corrected. We may make a Liquid Colour of it for staining or washing of Prints, or to be used as a Water Colour, by
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boyling it in strong Vinegar, and adding to it a little white Argil, which opens the Parts of the Verdigrease, and makes it a free writing Ink. The Physick Use is in external Compositions, and is an extraordinary Cleanser of foul Ulcers. We have another Preparation of it called *Tinctura Veneris*, or Tincture of Copper. Take Verdigrease one Dram, Spirit of Sal Armoniack and rectified Spirit of Wine, of each half an Ounce, let 'em stand till they are of a deep Sky Colour. This Preparation of it makes an admirable Injection for a *Gonorrhoea*, but it should only be used when the Infection is in the *Urethra*, and when it is only there, a Person may soon be cured with it. This is used by many Physicians of the first Rank, and was first introduced amongst us by Doctor Cockburn.

A Tincture of pure Copper in *Aqua Fortis* will produce a beautiful green Liquid, which if we dip in a Piece of Steel or Iron, will immediately give it a Copper Colour; and after that, if we rub that Iron over with an Amalgama made of Mercury and Gold,
it

it will take a Silver Colour; and then by putting the same over a Charcoal Fire, the Mercury will evaporate and leave the Gold so fixed upon the Iron that it may be polished.

Argentum vivum, sive Mercurius, or Quicksilver, I have treated of in my former Lecture, *i.e.* I have shewn from whence it is deriv'd; Cinnabar I have explain'd to be the Mother or Marchasite of it, of which we have two Sorts, *viz.* the native Cinnabar, and the factitious. In the first we observe the virgin Mercury, and in the other which is the Composition, the Mercury may be extracted, of which it is composed: But however this is, the following Preparations are used frequently in Physick, without regard to the native Cinnabar, or the factitious; though I conceive that the distilled Mercury is more pure than virgin. The first Preparation which I shall mention of Mercury, is called *Mercurius Sublimatus*, or White Sublimate.

This is made of Quicksilver, *Aqua fortis*, calcin'd Vitriol, and dry'd Salt. As for the

the Difference which the Chymists make in producing this Sublimate, by using Spirit of Nitre instead of *Aqua fortis*, it is trifling. This Sublimate is a very powerful Escharotick, and will eat away proud Flesh, and a little of it, dissolv'd in Lime-water, has been frequently used to cure cutaneous Distempers, and to wash scorbutick Ulcers.

The next is *Mercurius Sublimatus dulcis*, which is prepar'd of the before-mention'd corrosive Sublimate, and crude Mercury. From this we get what we call the *Calomel*.

It is remarkable that Mercury thus changed, is in the first Preparation, as White Sublimate, an immediate Poyson; but when it is in that Shape, which we call *Mercurius Sublimatus dulcis*, it is a safe Cathartick.

Mercurius Præcipitatus Ruber, or Red Precipitate, is made of crude Mercury and *Aqua fortis*, as our Professor of Chymistry will shew you: 'Tis of great Use in Unguents, to cure any Foulness in the Skin.

Mercuri-

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ralinum, which some esteem very much: They have each of them the same Quality, and operate chiefly by Stool. Some say that either of these are good in the Gout, the Dropfy, Scurvy, and Itch, as well as in venereal Cases.

We may yet mention one more Preparation of Mercury, which is called the *Cinnabar factitium*, or artificial Cinnabar, which is made of Sulphur and Mercury, and from whence the Mercury may be resolved, as in the Case of *Minium*, which by Fire may be made to produce Lead, as it was in its first State; witness in the burning of red Wafers, which are composed of Minium, Flour, &c. we shall have pure Lead drop from them.

S U L P H U R.

S*ulphur nativum & vivum Offic.* or *Sulphur Vive*, or *Native Sulphur*, is dug out of the Earth solid and pure. What we call *Sulphur factitium Offic.* or Brimstone, is

is rectified from the *Sulphur Vive* by Fire. It is of a yellow Colour, pinguid, ponderous, and easily inflammable, producing a blue Flame.

Sulphur Caballinum Offic. or Horse-Brimstone, is nothing else but what is produced from the Remains in purifying the live Sulphur.

Sulphur Commune, or common Brimstone, is made of common Sulphur, and common Rosin. We may see an Account of many Sorts of it, in *Hartmannus*, pag. 20, 21.

The *Lapis Ætites*, or the Eagle-Stone, has not yet been ascertained by the Naturalists whether it belongs to the mineral or animal Kingdoms: Some say that it is found in the Eagle's Nest. There is one of them now whole, and another of them broken, in the Collection of Mr. *Vigani* at *Queen's College*. The Description of it is, that the Stone is sometimes round, sometimes of the Figure of an Egg, and has always in it a small Stone that rattles when we shake it. It has been said, that it has been found in
the

the Maw of an Eagle, and likewise that it is a common Stone. For my own Part, I have found two of them, and have met with three or four more that were taken out of Gravel Pits, some at *Hillingdon* near *Uxbridge*, in the County of *Middlesex*.

Samuel Raynardson, Esq; well known to all the *Virtuosi* of his Time, had two, of an extraordinary Size; one of them, particularly, was more than three Inches Diameter, which he kept always in Water, to preserve the Body of Water which was contain'd within the outward Case. In this Body of Water was another Stone, which would rattle when we shook it; and we might hear the Water Noise at the same Time.

From hence it appears, that the *Lapis Ætites*, or Eagle-Stone, does not proceed from the Eagle; for neither Mr. *Raynardson*, my self, or others, that have collected this Stone, have ever found it any where but in Gravel-Pits, or upon the Ground where no Eagle had ever been seen.

Some

Some tell us, that it is of a small Size, no bigger than a Chestnut; but I have heard of one that was much larger than what I have mention'd. The Stone, however, in *Queen's College* Collection, is about three Inches in Length, and the broken Stone there, seems to determine that it was about the same Size.

This Stone has carried with it many superstitious Notions, and odd Conceits; 'tis sometimes term'd, *Lapis veluti prægans, alio in utero sonante*, from the sounding or rattling of the Stone in the Belly of the other; or that the Stone is pregnant with another. Some People would have it, that it influences the *Fætus* in a Woman with Child: Being worn about the Arm, it prevents Abortion; and about the Thigh, it helps Delivery. But many Proofs have been made of it, and we find there is nothing in the propos'd Virtues. I have only given this Account, that the Gentlemen in this Course of Lectures may not be disappointed in the Trial of it.

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Lapis Calaminaris, or Calamine, is chiefly found about *Flanders*, and at *Aix la Chapelle*, especially there. There is abundance of it found, which no doubt has great Influence upon the Waters of that Place, which are so famous. This Calamine has been given us by *Glauber*, as a Fossil, partaking of the Nature of Gold; and *Etmuller* recommends it as a Mineral, which will concentrate (as he says) the acid Spirit of Minerals. It is used in Medicine as a Dryer and Absorbent, in outward Applications; sometimes in Cerates and Plaisters, and as a Cleanser of Ulcers; and also as Collyriums against Inflammations of the Eyes.

This *Lapis Calaminaris* is used in making of Brass with Copper; and it is likewise used with Copper in making that Metal which is call'd *Bath Metal*, which resembles Gold, but will soon tarnish, as plain Copper will do. But to preserve a Metal of this Composition yet a little longer from tarnishing, the *Lapis Tutia* is used.

Tutia,

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Tutia, or Tutty, comes from the Brass in the Furnace: It is extremely hard, almost as Glass. Its Use in Medicine, is chiefly in Lotions, for inflamed Eyes.

Lapis Hibernia, or *Irish Slate*, is a Fossil, of a bluish Colour, is softer than the common Slate, and will break in Flakes. We have in *Queen's College* Collection, two Specimens of it, though both of the same Virtues: One of them is distinguished from the other, by having the Marks of Fern in it.

The Virtues are generally supposed to be healing of inward Bruises, that it helps the Lungs; but few regular Physicians use it.

Ammoniacum, or *Sal Armoniac*, we receive from *Alexandria* in *Ægypt*, by means of the Ships belonging to the *Turkey* Company; as likewise from the *Venetians* and the *Hollanders*, who trade to the *Levant*. We have two Sorts in the Shops, one which they call the natural, and another which is artificial. They tell us, that the first is found in such Ground as has imbibed the

Urine of Animals; but it is not at all reasonable to judge in this Way, since what we receive as such, is constantly in the same Shape, and about the same Bigness, in flat Planes or Cakes. We have an Account in the *Philosophical Transactions*, that they are factitious, and the Way of making them. Notwithstanding this, we have a Manner of making them under the Name of *Sal Ammoniacum factit.* compos'd of Urine, Sea Salt, and Wood Soot. This is what we generally meet with in the Shops.

This generally operates by Sweat and Urine, and is a good Aperient in most Kinds of Obstructions. We have, besides this, many others; as the Sublimation of *Sal Armoniac.* The *Sal Ammoniacum Volatile*, or *Volatile Sal Armoniac*, the *Flores Salis Ammoniaci*, *Aqua Regis*, the *Spiritus Salis Ammoniaci cum Tartaro*, the *Spiritus Salis Ammoniaci cum Calce*, or what is call'd the Spirit of *Sal Armoniac* with quick Lime, which is the Salt which we should use to produce the fine blue Colour with
Verdigrease,

Verdigrease, mentioned in my former Lecture. We have likewise the *Spiritus Salis Ammoniaci dulcis*, or sweet Spirit of Sal Armoniac, as well as the *Spiritus Salis Ammoniaci fuccinatus*, or Spirit of Sal Armoniack, with Amber; so we have likewise the *Spiritus Salis Ammoniaci acidus*, or the acid Spirit of Sal Armoniack: And the *Sal Ammoniacum Diureticum*, or Diuretick Sal Armoniack, to which we may add the *Sal Volatile Oleosum*. There are many other Preparations of Armoniack which I shall forbear to mention, because they are not in Use.

As to the Virtues of these several Preparations which I have hinted at, the following Account will describe.

The Sublimation of Sal Armoniack operates by Sweat and Urine, as that which has been purified: The Dose is likewise the same, *viz.* from twenty Grains, to about half an Ounce.

The *Sal Ammoniacum Volatile*, is sometimes prescribed in malignant Fevers as a Sudorifick; this is given in Form of a Boke

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with convenient Ingredients, for it is not fit for Powders because of its Volatility. The Dose is from five Grains to about nine or ten.

The Flowers of Sal Armoniack have the like Virtues with the sublimated Salt, and therefore a Dose must be smaller than that; the highest must not exceed fifteen Grains.

The Flowers of Armoniack Salt with Steel, which are of a yellow Colour, are good in all Kinds of Obstructions, Cachexies, Jaundice, Dropsies, and uterine Affections. The Dose is as the former.

Aqua Regia is principally used in dissolving of Gold, and the Spirit of Sal Armoniack with Tartar is Sudorifick, and is given in Epilepsies and Palsies; we may give this from ten Drops to forty in any Vehicle.

As to *Spiritus Salis Ammoniaci cum Calce*, I have mentioned above its Use.

The *Spiritus Salis Amm. Dulcis*, is good in Lethargick Cases, as well as in the Palsy, Scurvy, and Hyfterick Disorders; we may give from twelve to thirty Drops of it. It has been found to be useful by applying it outward.

outwardly where the Nerves have been affected.

The *Spiritus Salis Ammon. Succinatus*, is reckoned an excellent Cephalick; its Dose from ten to forty Drops.

The *Spiritus Salis Ammoniaci acidus*, is much the same as the Spirit of Salt, with which a Gentleman of *Brussels* pretends to make the *Aurum potable*, by putting Leaf Gold into it, and setting it in a digestive Heat for a few Days. I have seen him tinge a Piece of Steel of a Gold Colour immediately, by dipping it into a Preparation, which he told me was the *Aurum potable*, made after the Manner above-mentioned; but when we consider the Nature of the Ingredients, we may suppose that it can be of little Use in Medicine.

The *Sal Ammon. diureticum*, operates powerfully by Urine, as its Character intimates; it is given in the Case of the Gravel, and some suppose will dissolve the Stone in the Bladder. Its Dose is from ten Grains to about a Dram.

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The *Sal Volatile Oleosum*, has much the same Effect of Spirit of Harts-Horn, as Cordial, but moreover is an excellent Cephalick; we may give from ten to sixty, or eighty Drops at a Dose in any Vehicle. That *Sal Volatile* which is made of *Marum Syriacum* is much the best.

Tartarus, or *Tartarum* or *Argil*, is a Species of Salt of a grainous or Sandy Substance; many Preparations are made from it. It is first found in Wine Vessels that have been of long Duration. It is of two Sorts, the White and the Red; the Preparations that are made of it, are first the *Cremor Tartari*, or Crystals of Tartar, or Cream of Tartar. It is a gentle Cathartick, and passes likewise pretty much by Urine.

The *Sal Tartari fixum*, or fixt Salt of Tartar, is used to clear the Skin of Pimples, Freckles, and Morpew, especially the Oyl of it; but it is dangerous, and what I would not by any Means advise. The Salt of it self is operative, and often made to draw out the Tinctures of Vegetables, and may be given in all Kinds of Obstructions.

The

The *Tartarum Solubile*, or soluble Tartar. This works by Urine and Stool, and is given in Obstructions, Dropsies, Jaundice, and such Distempers as proceed from Weakness; the Dose is from a Scruple to a Scruple and a half: It may be given in any proper Vehicle.

Tartarum Solubile Calybeatum, which is the calybeated soluble Tartar; 'tis an excellent Operative, and possesses the Virtues of Tincture of Tartar with Iron. In Obstructions of the *Catamenia*, or *Menses*, 'tis a Sovereign Virtue; about a Scruple is the Dose, though some give more.

The *Tartarum Calybeatum* is another Preparation, which we call Calybeate Tartar. In this Composition is used the *Vitriolum Martis*, which is endowed with the Qualities of the former, but seldom used; the Dose however is from ten Grains to sixteen or eighteen.

The *Tartarum Emeticum*, or Emetick Tartar, has in it besides Cream of Tartar, *Crocus Metallorum*; or instead of that may be used *Vitrum Antimonii*; it is a very power-

powerful Emetick, and the Dose must necessarily be very small, such as from two Grains to seven or eight at most.

Tartarum Emeticum & Catharticum, or Emetick and Cathartick Tartar; in this the Salt of Tartar and *Crocus Metallorum* are used. It works by Vomit and Stool, but with great Violence, and is therefore in Use, and has good Effects upon such as begin to have the Jaundice or Dropfy; and also for those which are troubled with Hypochondriack Passions, for it accelerates the Motions of the Juices, and by that Means raises the Spirits: We may give this from three Grains to thirteen or fourteen, if it be well prepared.

Tartarum Vitriolatum, or Vitriolated Tartar. This operates by Urine and Stool, but is too sharp to be given alone. 'Tis good in all Excesses of Choler, and in the Jaundice especially; to use it as a Dentifrice, it will render the blackest Teeth as white as Ivory, which shews that it has somewhat of a corroding Quality; for which Reason I have before mentioned that Tartar could
not

not be of any great Use in Cosmeticks, but that in the Case of taking off Pimples in the Skin it might be used with Judgment.

Sapo Tartari, or Soap of Tartar, is sometimes called *Sapo Philosophorum*. They mix this in a Bowl from ten Grains to half a Drachm. 'Tis of good Use in the Gravel, being a fine Diuretick, and cleanses the Kidneys and Bladder. The Pill which is called *Matthews's Pill*, has this powerful Ingredient in it; but the Physicians seldom direct it.

Oleum & Spiritus Tartari, or the Oil and Spirit of Tartar. This Spirit is extremely aperitive, when it is well prepared either from the Oil or Spirit; with spiritous *Nitri dulcis* it is a powerful Diaphoretick, and also a gentle Diuretick, for which Reason it is given in the most obstinate Chronick Cases: About a Scruple, or as far as two Drachms, in a proper Vehicle is the Dose.

Sal Tartari Volatile, or Volatile Salt of Tartar, is made several Ways, which our Professor of Chymistry will inform you:
Our

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Our Physicians esteem it as an extraordinary Medicine for those Distempers which are seated in the Nerves, as Palsies, Apoplexies, and Epilepsies. The Dose of the Salt is from ten Grains to half a Drachm, and the Spirit from ten to fifty or sixty Drops.

Tinctura Salis Tartari, or Tincture of Salt of Tartar. It operates by Sweat and Urine, and is a good Aperitive; so that it is used in Scorbutick Cases, and in the Jaundice and Dropsies. We may give from ten to fifty Drops for a Dose.

TERRA SIGILLATA.

THE *Terra Sigillata* is of several Sorts, one of them we have under the Name of *Terra Sigillata Lemnia*, or *Cologne's Earth*. We have one which is white, and another red, besides the first which I have mentioned. We receive them in little round Cakes sealed in different Manners; but they seem all to carry the same Virtues with them, as being drying and astringent,
like

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like the *Bolus Armeniæ*, or *Armenian* Bole, or the *Terra Japonica*; however the last two are preferred by some Physicians. *Lufitanus* confounds the *Terra Japonica* with the *Armenian* Bole; but there is a great deal of Difference between the two, for the *Armenian* Sort is much the brighter coloured.

CORALLIUM.

C*Orallium*, or Coral, is of several Sorts, viz. the Red, which is of the most general Use, the White next to that, some of tawny Colours, and the Black. We have likewise what are called *Coralines*, which carry nearly the same Virtues in them. What we call Coral is however used indifferently, the White for the Red, or the Black for either. To me all Corals seem to be Plants, and I have this to justify me in my Opinion, that some Gentlemen of the Royal Academy of *Paris* have described even the Seeds and Flowers in their Memoirs.

We

We find the Corals plentifully in the *Mediterranean* Sea, and in several of the *East-Indian* Seas growing upon Rocks, and branching as Plants generally do, but without Leaves like the *Cereus Opuncha*, or *Indian Fig*, or as the *Echinomelocactus*; neither of which have any Leaves. The Coral is of a hard Substance, somewhat stony, but rather like the Claws of a Crab in its Texture.

They fish for this with Drag Nets; and break it from the Rocks in small Pieces, but sometimes meet with one of an extraordinary Size, branched as a Tree. I have seen one two Foot high in the Cabinet of Mr. *Vincent* at *Harlem*.

The artificial Way of making Coral to please the Eye, is to provide dry'd Branches of any Tree, and dip them into a Composition of Sulphur melted, mixed with Vermilion.

Coral is a good Astringent, and has been prescribed in Diarrhœas and Defluxions: It is of good Use to correct the Acidities in the Stomachs of young Children, and has obtained

tain'd some Reputation from using it, when Children are cutting their Teeth, at which Time they are most subject to Fits.

What is said of Amulets, is not to be regarded, though several Writers, otherwise of good Credit, have mentioned them of great Efficacy.

N I T R U M.

N*itrum*, or *Nitre*, or *Salt Petre*, has various Preparations. It is found in many Places pure, and is also factitious, *i. e.* made with us from such Appearances as we find in Grots, Cliffs, and Caverns, under Ground, which seem to be viscous at the first Touch, are partly liquid, and partly fix'd, like a Jelly. The *East-Indies* afford us a great Quantity of it, though there is hardly a Cellar or Vault in *Europe* without it. The Preparations from it, are, first, the *Nitrum Purificatum*, or rectified Salt Petre; and this is again rectified into that which we call *Sal Prunellæ*, which in some Places

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Places is named the chrystal Mineral. Mr. *Godfrey* the Chymist, so famous for his Works, will not suffer any of the Prunel Salt to go to his Elaboratory, which is not in the strictest Manner rectify'd; but uses it as one would do Nitre, to preserve Flesh of any Kind from corrupting; and is certainly of better Purpose than the common Nitre or Salt Petre. This is given in *Gonorrhæa's* to cool the Body, from about six Grains to a Drachm in the Dose. It is of great Service in any Inflammation.

Sal Polycrestum, or, as one may explain it, the Salt of many Virtues. It is mix'd in the Shops with some other Ingredients, which makes it more easy to the Patient. The Dose is from Half a Drachm to a Drachm, and it is cathartick and diuretick.

Nitrum Catharticum, or Purging Nitre, is accounted a good Cathartick and Diuretick, and is therefore of Use in all inward Obstructions. The Dose is from a Scruple to five Drachms.

Nitrum

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Nitrum Saturnizatum, or the Nitre with Lead. Some Authors mention this to be done with Tin, Sulphur, and Tartar, which they call the *Nitrum Joviale Sulphuratum*, and also *Hermaphroditicum*; but few use it.

Spiritus Nitri, or Spirit of Nitre. This Spirit is corrosive, and too much so, I think, to be used internally, notwithstanding it has been given as far as thirty or forty Drops, in a proper Vehicle. We may judge of its Action by its Power of dissolving Metals. If we put this upon Oil of Carraway, it will give us a Flash and strong Ebullition, equal to the Strength of Fire, and will yield such Fumes as by mixing with the Air will be sensible for three or four Hours.

Spiritus Nitri dulcis, or the softest Spirit of Nitre, is used by the Distillers to give a Flavour to their common Spirits, to make them taste like *French Brandy*; but the Taste does not remain long.

The Virtues of it are diuretick, and may be given from about twenty Drops to eighty.

BOLUS ARMENA.

Bolus *Armena*, or the *Armenian Bole*, is a natural Earth, brought chiefly from *Armenia*, though we have of its Kind in *Europe*, and even in *England*, in many Places. It has been call'd with us, *Bole Armoniac*, by the Vulgar. I should be apt to conjecture, that most of our chalybeate Waters pass through a Body of this Sort. It is certain this Earth has some Particles of Iron in it. It is of a palish Red, oily to the Tongue, or viscous. It is a fine Astringent, and a Vulnerary. It is prescribed in Diarrhæa's, Hæmorrhages, Catarrh's, and all Kinds of Defluxions. They use it likewise in strengthening Plaisters; but any of the sigillated Earths, I believe, would be as useful.

The *Lapis Granatus*, or Granate Stone; the *Rubinus*, or Ruby; the *Smaragdus*, or Emerald; the *Hyacinthus*, or Hyacinth; the *Saphirus*, or Sapphire: These are called the
greater

greater precious Stones, and are used, or should be, in the *Confectio de Hyacintho*; though 'tis to be doubted whether we find them always in the Shops in *England*. I must confess, that I cannot find that there are any extraordinary Virtues in them, notwithstanding that several Physicians have sung in the Praise of it.

It is remarkable, that the Confections of this Kind are better or worse, as the Stones are ground finer, or are more or less levigated. By Levigation, we mean washing the ground Parts as fine as possible. Some Authors say, that these Stones have the least Share in the Preparation of the Confection; for their sharp Angles, how fine soever they are ground, will yet tear the Coat of the Stomach; therefore this Confection is not much used.

LAPIS JUDAICUS.

THE *Lapis Judaicus*, or *Jews Stone*, is somewhat resembling an Olive in its Figure: It is friable and soft: It consists of several *Striæ*, which are more or less in Number, according to its Length and Breadth. It is generally of an ash or greyish Colour: It is found in many Places in *Europe*, as well as *Asia*. The Use that has been made of it, seems to inform us, that it is good in the Strangury, or any Stoppage of Urine; and some, even at this Day, use it in these Cases.

The *Lapis Lyncis*, or *Bellemnites*, or *Thunder Bolts*, are Stones of a pyramidal Figure, of several Colours. The largest Sort that I have seen, are about three Inches long, and are found in the Clays in the western Parts of *Middlesex*. Very frequently about *Newmarket* we meet with great Quantities of a smaller Size, especially on the *Suffolk* Side; but in the Clays about *Gurton*, two Miles

Miles from *Cambridge*, they abound, as the Reverend Mr. *Halfhyde* of *Catherine Hall* has shewn me, these last are more like *Agate* than what are found in *Middlesex*.

This is accounted an extraordinary Diuretick, exceeding the *Lapis Judaicus* in its Powers; but 'tis seldom used.

The *Sardus*, *Sarda*, or *Corneolus Offic.* is the Cornelian, which is sometimes white, but more commonly of a vermilion, and sometimes of a flesh Colour; is found in the Kingdom of *Sardinia*, is said to be of Use to be given in Fluxes of Blood, but is not at present in Practice.

Onyx Offic. the Onyx Stone, is the least transparent of the precious Stones, but bears a fine Polish. It is almost the Colour of the Nail of a Man's Finger. It is one of the Charms that has been used to assist the Spirits, but is now thrown out of Practice in Physick.

Heliotropium Offic. or common Bloud Stone, is opaque, and very hard: Its Colour is green, intermix'd with red Veins, or Spots. I have seen two or three among

the Pebbles that pave the Streets in *London*. It bears the Polish, and is ranked among the Jewels. It is said that it will stop bleeding being applied to any fresh Wound, and that Opinion prevails yet so much among some People, that 'tis hard to persuade them the contrary. I am persuaded it does neither Harm nor Good; 'tis mentioned as a Charm.

Jaspis Off. or Jaspar, is an opake Gem of a green Colour, but sometimes is a little inclining to red. This is found in *India*, and is in some Esteem for its Hardness, and bearing the Polish. The Virtues are said to be the same with the Cornelian, as *Swenkfeldus* informs us; but no Physician uses it in Medicine now-a-Days since Charms have been laid aside.

Lapis Nephriticus, or Nephritick Stones, are of two Sorts, both of 'em inclining to a green Colour, or one much paler with other Colours intermixed. These are brought to us from *America* and *Spain*, and some Places in *Bohemia*; the only Use which is ascribed to them is to prevent the Stone, or
cure

cure the Cholick by wearing them as Amulets.

Lapis Amethystus Off. or the Amethyst is a Stone which was first brought us from *India*, *Armenia*, and *Arabia*, by our Ships trading thither; 'tis a Gem of a reddish Purple Colour, and transparent. The Report we had of its Virtues would have us believe that it prevents Ebriety, because as the Authors who have wrote of it tell us, it is of the Colour of Red Wine. But this is a Charm like some others which we mentioned. All that we can say of it, with Regard to its Value, is, that it has been formerly placed among the brighter Gems. We find them now about *Bristol*, and in *Ireland* plentifully.

The *Beryllus* is a shining Gem of a blueish green Colour, brought from *India* to be worn as an Amulet; it has been thought in *Germany* among the *Hungarians* to make Men invulnerable. This I mention because it has been handed to us by many Authors; but this in Point of Reason can carry no other Virtue with it, than other precious

Stones which have been worn as Amulets; and from whence come the first Invention of Rings and Bracelets, which we had first from the *Egyptians*, handed down to us by the *Phœnicians* through the *Greeks* and *Romans*.

The *L. Topasius* & *Chrysopasius Off.* or Topaz, is a bright Gem, a little inclining to a Golden Colour. This is another Charm against Melancholy, as 'tis said, by comforting the Spirits and evil Dreams, as *Schrouder* informs us. But we have now more Knowledge, and the Stone is only used as an Ornament.

Lapis Selenites, or Selenite, is a soft transparent Fossil, of the Colour of the *Bristol* Stone, which will break in Flakes like the *Talcum* or Talch; this by filing or rasping will afford a white Powder. It is met with at *Epsom* in *Surry*, where the Wells are dug, and at *Kensington* in *Middlesex* at the Wells there; but this is hardly found less than twenty or thirty Foot deep. Its chief Use is in Cosmeticks.

L. La-

L. Lazuli, or Arm-Stone, is of two Sorts; it is hard as Marble, and of a blue Colour, which will bear the Polish; this is interspersed with Golden Strakes or Veins, which give it a noble Appearance when it has passed the Mill. The baser Sort has not pure Gold in it, but is rather a *Marchasite* of Copper, while the other has Gold in it. We find these in Mines where either Gold or Copper prevail; both these are valuable, though there is only one of great Use. That which I mean produces the *Ultramarine Blue*, as well as pure Gold. The other produces a Colour which is called *Verditure*, and, as if it was mixed with *Lapis Calaminaris* and Copper, yields a *Brass-like Metal*. The latter is likewise polished, and made into Tables and Toys of several Sorts; but the first is too rich for any Use of that Kind; for the very blue Part of it, when it is reduced to Powder and well prepared, is sold for four Pence an Ounce.

It is reported by *Paulus Ammannus*, that the Confection made of it is Cordial.

Amian-

the Muscles, the Pearls will remain at the Bottom. These Pearls however are not sold at more than sixteen or eighteen Pence an Ounce at first Hand. But whether the Pearls proceed from the Conchs, or from the Animals within them, they are of the same Use, and are received at this Day by all Physicians as cordial and powerful Alexipharmicks. They are likewise given to resist Poysons, when they have been well pulverized. We are assured of this, that they are good Absorbents and Destroyers of Acidities, especially in the Stomach, which must consequently guide all the other Juices in the Body; as a Substitute we use the Powder of Oyster-shells calcined, as well as what we call Crabbs Eyes, which are imagined to be Discussive, and good against the Stone.

The *Chela Cancrorum*, or Crab's Claw, are of the same Efficacy as the former, and may be used indifferently with them. Any of these are good in the Distemper called the Heart-burn, taken in any Vehicle.

Sal

Sal Gemma Offic. or *Sal Gem*, is a transparent Body, dug in Quarries. Its Taste is sharp and salt, and is brought to us in great Quantities from *Italy*. There is likewise some of it made with us, but it has little more in it, with regard to the Use, than common Salt, unless in the Solution of Metals it may happen to be used, like common Salt. We find this in several Places in *England*.

Lapis Contrayervæ, or the Contrayerva Stone, so called; for it is a Composition, and not a natural Stone; being made up of calcined Hartshorn, red Coral, Pearl, white Amber, and Crabs Eyes, with the Root of Contrayerva, in a Solution of Gum Arabick; and generally is added to it some Ambergrease, or some other Perfume. 'Tis much in Use in the Shops, as a powerful Alexipharmick, given only from ten Grains to about Half a Drachm at most, for a Dose.

The Magnet, or Loadstone, has been generally thought to ease Pain, being worn about the Body, and particularly to cure
the

the Gout; but that with some other Stories which I have mentioned before, is of no Use in Physick. However, as it has been mentioned and put with them as a Charm, I think it necessary to inform you of it. But however, as the Magnet is of great Use otherwise, I cannot pass by an Observation or two worthy your Remark, concerning its Power of Attraction, *viz.* that, wherever we find one of these Stones, the certain Method to discover it, is by strewing Steel or Iron File-dust upon it, and wherever we observe that the File-dust sticks to it, we may be sure that the Poles are there, and especially where the greatest Quantity of File-dust remains, that is the North Pole. And a Stone of this Kind, when it comes to be cut and set, as we commonly do in *England*, there must be strict Regard to saw it in that Order. We have had some with us, of very great Weight, even as far as a Hundred and thitty, or forty Pound, each Stone, some found in *Devonshire*, of which there is one now in the *Royal Society Musæum*. We have

have them brought, likewise, from *Norway*, and they are to be met with in some Places in *Germany*. The great Use of this, when it is rightly set, or well ordered, is to touch the Needle, which is one of the best Regulators we have in Navigation. It has so great an Affinity with Iron, that there is hardly an Iron which has not some of its Virtue: For if we take any Piece of Iron which has stood perpendicular for three Weeks or a Month, and turn it towards its proper Poles, it will attract Steel almost with the same Force as the Magnet. I must mention, moreover, that a Knife, or any Piece of Metal well polished, either of Iron or Steel, being passed over a Loadstone, with a quick Motion several Times together, will gain such a Strength from the Stone, as will impower it to take up Iron File-dust, a Needle, or any such like Body.

Besides this, we have a factitious Loadstone, made of thin Plates of Iron or Steel, every one touch'd in the Manner I have mentioned above, and laid close together,
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and bound with Wire. A Gentleman in *France* is famous for them, and I much suspect that we have not a few in *England* of that Sort, that are filed into a Form, and varnished over, to make them appear like the natural Stone. However, I find that they have Strength nearly equalling the common Stone, when 'tis armed or set.

X *Bezoar Mineral*, is both natural and artificial. In the Collection of Signore *Vigani*, deposited in *Queen's College*, we have the natural or the Mineral, as we may call it. 'Tis of a stony Substance, like the other Bezoars, with several Coats or Coverings. It has the Smell of Rhubarb, and somewhat more granulated than the others, excepting the occidental. I am apt to conjecture, that it is somewhat like the *Lapis Aetites*, which carries a little loose Stone in its Body; because I find a Cavity in the Middle of it, that seems like that in the Eagle-stone.

Lapis de Goa, or Goa Stone, is brought to us from the *East-Indies*. It is not a natural Stone, but of a very high Composition,

tion, and accounted one of the richest Cordials in the World. It consists of Hyacinths, Topazes, Sapphires, Rubies, and Pearls, an Ounce of each; the Emeralds Half an Ounce; oriental Bezoar, white and red Coral, of each two Ounces; Musk and Ambergrease, each two Ounces; Leaves of Gold, to the Number of forty: These must be levigated into a fine impalpable Powder, and with Rose-water made into a PASTE.

We make this PASTE into round or oval Balls, and polish them. It is given in Fevers, as an Alexipharmack; but, as I have observed before, there are no medicinal Virtues in the Stones; so the whole Virtue of this Composition seems to proceed from the Sweets in it.

Gummi Ammoniacum, Gum Ammoniack, is brought from *Syria*, and said to be the Product of a ferulaceous Plant, *i. e.* it bears its Leaves and Flowers like Fennel, but it is gigantick in its Growth, even more than the *Ferula Galbanifera*. This Gum is taken from the Trunk or Body of the Plant,

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and is white and transparent at first, but being exposed to the Air, is somewhat yellowish on the outside, when we make it by Fire. It is the Juice of the Plant expressed and boiled to a proper Consistency, which is indeed the Way of producing Gums from any Plant, which otherwise would yield none at all. The Gum *Hedera*, if 'tis true, is one of this Sort; but with regard to the *Ammoniacum*, 'tis of a pleasant Smell, its Taste somewhat bitter, and a volatile Salt predominates in it. 'Tis used *per se* internally and externally; internally in *morbo uterino*; externally to dissolve hard Knots, Tumors and Bruises. This Gum *Ammoniac* has a peculiar Virtue in keeping the Part to which it is apply'd in a continual Exsudation.

This, as well as most of those that are called ferulaceous Gums, dissolve in Vinegar; we may strain them through Linnen Cloths, to purify them, and then evaporate them till they come to the Consistence of Honey.

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The *Gum Ammoniac* is often adulterated with Rosin, and it's hard to discover it by the Eye, only as we judge the Ammoniac ought to be much darker in its Colour. It is to be questioned whether by dissolving and evaporating of it, we do not lose a great Part of the volatile Salt; for we distinguish a strong Flavour in the Evaporation.

When this Gum is opened by Vinegar, it becomes exalted much more than it is by any other Method, as one may perceive by the Smell, which is then very strong.

This Gum is often used in Pills, and you must then incorporate it with other Ingredients, in a warm Mortar, without any antecedent Dissolution. Dr. *Willis* adds this Gum in the Distillation of *Spiritus Salis Ammoniaci*, which Spirit will produce Crystals of a triangular Form.

Manna is the Gum proceeding from an Ash Tree, frequently growing in *Italy*, of which Sort I have imported several which are now flourishing in *England*. The Manna issues from this Tree by making Incisions in the Bark in *April*; but sometimes

we find it upon the Leaves, when they are nearly ripe, at the latter End of *September*. It is said to be gathered, by most Writers, from the Leaves, only in dewy Mornings; but considering the great Quantities we have of it from abroad, we may be well assured it cannot be worth the While of the People in foreign Countries to gather it at the easy Rate which we receive it. This is used as a gentle easy Purge, being dissolved in Water-gruel. The Dose is from a Dram or two to young Children, or as far as an Ounce to middle-grown Persons, and an Ounce or two to stronger Constitutions. That in *Italy*, which is accounted the best, comes from *Calabria*, though the *Syrian Manna* was formerly in most Esteem.

Aloes, or Gum Aloes, is produced by expressing the Juice from the Leaves of the Plant called the Succatrine Aloe. It has its Name from the Island *Succoterra*, or *Succotra*. The Juice is boyl'd till it comes to the Consistence of Honey, and is then put up into Cases as we receive it. It is extremely bitter to the Taste, and therefore
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is seldom used in any liquid Shape, but is chiefly made into Pills; so that the Dose may be given to Half a Dram. Salt of Tartar is its best Corrector, but we must not be too free with that Salt, lest we make it lose its purgative Quality. It is the chief Ingredient in the *Species Hieræ*. It is of great Use in such Cases where the Vessels are too much filled with Viscidities. It is a good Cathartick in watry, cold, corpulent Constitutions: It is likewise of Use in promoting the *Catamenia*, or menstrual Discharges. It is likewise helpful in destroying Worms in Children.

Aloe Hepatica is brought to us from the *West-Indies*. It is much more violent in its Operations, than that from *Succoterra*. We may easily distinguish it from the other, by this being of a liver Colour, while the other is black, and this is strong scented, while the other is little so. It is rather too harsh for the human Constitution, but does very well for Cattle.

Mummia, or Mummy, is brought to us from *Egypt*, found there in the *Hecatombs*.

It is the Flesh of Bodies that have been im-balmed with Myrrh, Aloes, and other sweet scented Gums. We have it every Year brought over in large Quantities, tho' at present it is not so much in Use as it has been formerly. The Virtues ascribed to it are the same with those of the *Sperma ceti*, or other Balsamicks of the like Kind. With Regard to what I have said before of the Superstition of the *Egyptians*, I have met in a Box of Mummy with many Amulets and Charms that have been fixed to Parts of the Bodies, not only of precious Stones, but Insects that have been carefully tied and wove in the wrapping Clothes; among them particularly I have met with some of the *Millepedes*.

Opium is the inspissated Juice of the great white Poppy-head, which grows frequent in *Turkey*, and is cultivated there on Purpose for Medicine. Its Effects are well enough known with us to shew that 'tis a powerful Hypnotick. The *Turks* use it to raise their Spirits, as we do Wine. It is the principal Ingredient in the Liquid Laudanum,

num, but should be used with great Caution. For as soon as it grows habitual to any Person of the strongest Constitution, 'tis hard for him to abandon it, or leave it off. I have known however an Instance or two of Persons that from a Grain have arrived to the eating half an Ounce of pure Opium in a Day, and another who began with five Drops of Laudanum, and in a Twelve-month's Time could have no Rest without taking five Hundred Drops in a Day. Neither of these lived long after.

Galbanum, is the Product of a Ferulaceous Plant, brought to us from *Syria*: The *Menstruum* to dissolve this in is properly Vinegar. This is put to the same Use as the *Gum Ammoniacum*: It abounds in Sulphur more than the Ammoniac; and is more odious; it is briskly inflammable, and as combustible as any of the Gums, being distilled it produces a great Quantity of sweet volatile Oil. It is an Ingredient in *Spiritus Salis Ammoniacæ Galbanetæ*, it is used in Hysterical Cases, as well externally as internally; a Drop or two

of the Oil given in a proper Vehicle will assist in strengthening the Womb, but is given with Difficulty if the Constitution be weak; and in Plaisters it prevents the falling of the Mother. We likewise use this Gum in Fireworks, especially in making of Cyphers, or Coats of Arms in Fire; for when we use common Salt, well dried in an Oven to produce a blue Flame, this Gum ought to be joined with it, as well as Rosin in common Pitch; so where we would produce a green Fire, and use Verdigrease finely powdered, this ought to be a Companion with the other Parts of the Composition, such as Gun-powder finely powdered, Rosin and Pitch; in white Fires Camphire is used with this Gum and Rosin, with the Saw-Dust of Deals, or the Fir-Tree finely pulverized; the red Fire is made of Steel-Dust and this Gum, with Gunpowder finely pulverized, and, for want of that, of Nitre and Sulphur of equal Quantities pulverized and finely mixed.

Bdellium is a Gum which will dissolve in nothing but Vinegar, or a strong Verjuice:

juice: It is the Product of a Tree as large as an Oak; it has been thought by some to have been Ferulaceous, because it dissolves in Acids, but, as we may see in the Chymical Preparations of it, it yields Oil, and a large Quantity of acid volatile Salt; it is very inflammable, it is used internally and externally; by the Chymists it is distilled *per se*. The Spirit consists of a Volatile acid Salt diluted in its *Phlegma*; it is of an acrimonious Taste, and a dark rubie Colour, and transparent when pure and clear; it is used internally, being one of the Parts in the Composition of Venice Treacle, and externally in Plaisters, as appears by the *Pharmacopœia*.

Sagapenum comes from *Asia*, and is the Product of a ferulaceous Plant: it smells somewhat like Garlick. I suspect that this was the *Silphium* of the Antients, as well by its Scent, as growing frequently in those Parts we receive it from. It is bitter to the Taste, and of a yellow Transparency; it is an Ingredient in the Venice Treacle, and in
Empla-

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Emplastrum de Melilot: It is seldom used *per se* internally or externally.

Gummi Fœniculi, we have this from *Spain* and *Italy*; it is a Gum made from the sweet Fennel, which grows there in Abundance, the Trunk swells about *August*, and breaks in the Middle from Scissure. The Gum distills, and is transparent like Venice Turpentine, but soon turns yellow on the outside; the common People use it for the Tooth-ach, by putting it in an hollow Tooth, and it is used in Stomachical Plaisters.

Benzoinum, *Benjamin*, or *Ben's Wine*, comes from a large Tree in the *East-Indies*, the more white Spots it has in it the better: It is inflammable and resinous, abounding with volatile Oil and Salt; it is used internally in Pills, externally in Cephalick Plaisters in Fumigations, and it causes Expectoration; it is also used in any Defect of the Lungs. The Flower of *Ben's Wine* distill'd in *Balneo Mariæ* produces a *Butanum*, and a lymphid Balsamick Oil, both very odoriferous, which are used in Perfumes.

Sanguis

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Sanguis Draconis is brought to us from *Carthage*, and is the Product of a large Tree of a Palm-kind, but more prickly on the Stem than the common Palm; it is the Tears of the Tree, which are found plentifully on every Branch, and are brushed off. Doctor *Rusb* of *Amsterdam* has a large Branch of this Tree, with the Tears upon it, which is the best Specimen in *Europe*: This is sent over to us in small Pieces, wrapt up in Leaves; it is used in Plaisters with Turpentine and yellow Wax, these are commonly applied to the Top of the Head, to stop the Fluxions and Catarrhs; the Powder is used to strengthen the Gums, and in astringent Plaisters. It is likewise used in the Bloody-Flux in Lozenges, or in Powder alone; it is also in Unguents as an Incarnative, but I cannot find any such a Thing as an Incarnative, unless the Flesh of any Wound, being well secured by Gums of this kind and put into a regular Order, will be disposed to heal.

Lacca is a Glue, and comes from *Sumatra*; it is of a reddish Colour, it is made when



Gentlemen,



S I am now reading to you of the Roots, Barks, Woods, Leaves, Flowers, and Fruits of Plants, it is necessary that I inform you why the Roots are sometimes used in Medicine, and the other Parts left out; and again, why the Seeds are sometimes preferred before any of the other Parts: The Bark sometimes is used instead of all the rest, and the Wood is often used with us where none of the other Parts of the Plant are esteemed.

The Flowers of Plants are sometimes useful, and the Fruit often so: Thus we have different Virtues lodged in the different Parts of Plants.

The Reason why this happens is, because every Plant has as many Vessels in it
of

of different Forms to alter the Juices, as any Animal Body; and the Difference of the Parts in Plants, as well as in Animals, therefore produce different Effects when they are used in Medicine.

When we use the Parts of Animals, sometimes the Horn is necessary, sometimes the Bone, sometimes the Hoofs of Animals, sometimes the Brain, other Times the Flesh, and oftentimes the Blood; so, as we have observed above with Regard to Plants, their several Parts are not always to be used at the same Time: For there is an Analogy between Plants and Animals, there is a Circulation of Juices equally just in both, and harmonious to one another, *i. e.* every Plant has Vessels for the Passage and Secrecion of their Juices agreeable to those in Animals, so far as 'tis consistent between a created Body that has not Local Motion, and that which has the Benefit of moving from Place to Place.

As we are well assured of the Circulation of the Blood in Animals, so may we be certain of the Circulation of Sap in Plants, which

which have as proper Vessels for that Use. They have those Analagous to Arteries and Veins, through which the Sap as continually passes, and alters itself as in any Animal. There are likewise secretory Ducts, and Capillary Tubes, into which the finer Parts of the Sap pass, to explain the Buds, Leaves, or Flowers of the Tree; all these are fed by the Root. In many common Cases the Roots of Plants furnish themselves with Sap about *August* to supply the Plant with Nourishment during the Winter, as some Animals lay in their Provisions about *August* or *September*, to support themselves in the more severe Season of the Year. Some of the Animals sleep all the Winter, as the Hedge-Hog or Urchin, the Bat or Flitter-Mouse, the Snake, the Tortoise, and the Lizard; so we have several Plants which do not put forth their Leaves or Branches in the colder Seasons.

We have likewise those Plants which produce their Fruits, and ripen them in the hardest Frost, and carry their Leaves all the Year, as well as their Power of Growth.

These

These I have already mentioned in a former Lecture, when I treated of the Mistletoe.

It is plain from what I have mentioned in several of my Works, and the Experiments I have produced before the *Royal Society*, and the most curious Persons abroad, that the Doctrine of the Circulation of the Sap has been the chief Motive of regulating and reforming their Farms and Gardens: For since that has been known, the People have been more certain of the Time for cutting their Grass and Corn, *i. e.* by knowing when either were in their full Ripeness. It has been likewise a Motive to induce several Gentlemen to plant Trees in Summer, which heretofore was never practised, though a Tree planted in *July* will not fail to thrive much better than any Tree planted between the End of *October* and the Beginning of *February*.

The largest Trees that can be removed from one Place to another, may be in the Time I mention'd, transplanted without Hazard; for at the Time I mention, they renew their Roots, and lodge such a Stock of

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Nourishment, as will not only preserve them in the Winter, but make them shoot the Spring following with as much Vigour as those Trees which had been planted three Years before in the common Way.

Soils are said to be conducive to the Growth of Plants, and where these happen not to be agreeable to the Growth of those, the Farmers and Gardeners generally use Dung; but I am of Mr. *Lawrence's* Opinion, that Dung is not always necessary, any more than as it consists of ight Parts; it may be used in a stiff Soil, to open the Earth.

What I have said of the Mistletoe growing upon the Oak, that there is no Difference between that and another growing upon a different Plant, in its Virtue seems to be confirmed in this, *viz.* that if one is of larger Growth, it has still the same Quality in a Handful of that which is of smaller Dimension.

We shall now and then see Corn which has been sown too close, which will have a thin and long Straw, and an invalid Ear; while

while on the other Hand, the short Straws and the rich Ears of Corn, stand more remote from one another.

One could give several Instances how much a Plant receives its Nourishment from the Difference of Soils and Situations; but it is Time we come more particularly to explain that though the Earth or Situation of a Plant may render it more or less luxuriant yet it may preserve the same Powers.

When we speak of the Seed possessing more oily Parts than the Root, we must suppose that the Seed being furnished the last with Juices, at the End of the Season has fewer of the aqueous Parts in it than the Root, which receives its Nourishment immediately from the Earth and the Water, contained in it.

This is somewhat after the Manner of an Alembick, which separates the more volatile Parts from the terrestrial Parts; or when we make the Analysis of a Plant, or any thing else, chymically, we find the Resin, the volatile Salts, and other Parts, according

to the Capacity of the Plant, more or less abundant.

If we take the Bark, it has a different Effect from the Wood it was joined to; which shews that it has not in it the same Juices of the Wood it was taken from.

If we use the Root of the same Plant, and make the Analysis of that and the Wood, we shall find fewer resinous Parts in the Root, than in the Wood.

If we make any Experiment between the Root and the Leaf, there is less Correspondence of Quality; and when we have try'd the Difference between the Root and the Seed of the same Plant, we find that the Seed being more oily than the Root, will have a more immediate Effect. We have had some Disputes concerning the Differences between Oils and Essences: Some would always have the Oil of a Plant to be the most prevalent, by which they meant the Essence in some Leaves of Plants; such as the Orange, Lemon, Thyme, Myrtle, and Plants that are ever-green.

Such

Such Essence or Oil is best to be extracted from Plants when they have been well dry'd and kept in a dry Place; for when the Air meets with them, it will attract these Parts, and make them lose their Smell, as we find in the Winter Marjoram, and other aromatick Plants, even while they are abroad in the Winter.

A dry'd Root, at the same Time managed in the same Way, and gathered at a proper Season, will reserve its resinous Parts, and operate, if it has Powers enough, as a Cathartick, while the Seed may perhaps be only a Carminative or Diuretick.

An Instance of this is the Root of the Jallap, whose Resin purges violently, but the whole Root, infused, is a gentle Cathartick. The Seeds at the same Time are a little cathartick and diuretick; and if we take the Resin of any Plant from the rest of it, we may be sure it will purge, if it has that Power in it, or prove an Emetick, according to its Quality.

The Leaves of the Oak have an Astringency in them, but not equal to that of the

Bark; neither is the Bark equal to that of the Wood: For when the Saw-dust of the Oak is distill'd, it is accounted the strongest or most powerful Stiptick we have growing in *England*. We have said before enough of the Berries of the Oak, and the Galls; how far they have a stiptick Power, which are both of them Parts depending upon the Oak.

The Acorn, or Fruit of the Oak, is famous as an Astringent, and at the same Time a Carminative.

This is enough at present to shew that the several Parts of Plants are not equally the same in their Qualities with one another; but to shew you more particularly how near the Parts of Plants and Animals are agreeable to one another, not only with regard to their Frame, but to their Degree of Life, I shall bring one or two Instances by way of Confirmation.

Every one of the Spurges, or milky Plants, may inform us of the Sap Vessels, and how they are placed, and that they do not depend upon upright Tubes, as some say,

say, but have their proper Vessels to receive the Sap from the Root, and have it circulating from thence to the Summit of the Plant, and from thence to the Root again. In the Leaves we may plainly see that there are those Parts which are analogous to Arteries and Veins, and the Juices appear as different.

This is the properest Subject, unless it be the Bulbs, that I can introduce at this Time of the Year, when it is supposed that the Weather is in its sharpest State, and at the same Time I must observe, that those who are of Opinion that Heat principally conduces to the Motion of the Sap and Plants, must be mistaken: For so long as we have Proofs of the Tulip growing in Winter, the Hyacinth, the Narcissus, and many others, too tedious to mention, together with this Plant, which I bring as one Proof of the Circulation of the Sap continually, I think there is no Room to doubt that Plants in their different States are analogous to Animals, in their respective Degrees or Orders.

B A R K S.

C*ortex Guaiaci*, is the Bark of a Wood growing frequently in *North-America*, especially in *Virginia* and *Carolina*: The Wood is received with us as a Commodity of great Worth, but the Bark is of less Value. The Gum is of extraordinary Virtue, because it has in it the Powers of the Bark and the Wood. The Bark, however, by being infused in a proper Vehicle, is accounted of great Use in cutaneous Cases, *i. e.* such as proceed from the Obstructions of the perspirable Matter in the miliarial Glands; but the Gum much more than this, is very warm and deterfive, and therefore good in all Ulcerations and Gleets, both internal and external. However, in external Cases, the Infusion of the Bark being more moderate in its Operation, is the best. We are told too, that it helps in the Gout, being infused in Wine, and apply'd warm to the affected Parts.

While

While I am upon this Head, I may add, that the Gum of this Plant is accounted almost a Specifick in *Gonorrhœa's*, being taken three or four Times a Day, in a proper Vehicle, but 'tis apt to make the Skin change of a yellowish Colour.

The Wood of this Plant being boyl'd in Water, has an Effect pretty near the same with that of the Cortex or Gum.

Cortex Peruvianus, sive Quinquina, sive Caskarilla, is the Bark of a Tree, which we commonly call the *Jesuits Bark*, growing in the Province of *Loxa*, in the Kingdom of *Peru*. This Tree has not been known as yet, by the best Botanists; even Mr. *Petapber*, the famous Apothecary in *Aldersgate-street*, could not discover it, notwithstanding his Expence and indefatigable Enquiry. But we have lately received a Present from a Gentleman who has been in those Parts, sent to the University of *Cambridge*, of some Seeds of the Tree, which appear to be the most like Plum-Stones, and which we hope to propagate. Its Virtues are well known in Intermittent Fevers.

Fevers, where it generally has good Success. It is a powerful Astringer it; and in all Cases where Bleeding seems to be desperate, and cannot otherwise be stopped, the taking of this internally proves an excellent Styptick. It is therefore good in all Kinds of Fluxes, and Disorders from Relaxations. The late Dutchess of *Beaufort*, who was so curious in Botany, and other curious Subjects, had always a Tincture of this Bark in Red Wine by her, to give, as a Bitter, when any of the People about her had their Stomachs too much relaxed.

The Bark of the Oak has been frequently used in lieu of this Bark; and some have joined with it the Bark of the Ash. As for the Oak Bark, the *Druides* knew the Prevalency of it, and used it much upon the same Occasions that we have mentioned. It is a strong Styptick, and one of the best that we have made at present, to prevent involuntary bleeding, being distilled with Vinegar, or even the Saw-dust of Oak, with Vinegar distilled, would produce the same Effect.

Cortex

Cortex Tamarisci, or the Bark of the Tamarisk Tree, is now little in Use, because it is no durable Commodity, or cannot lie long in the Apothecaries Shops without losing its Virtues. We have it, however, in several old Gardens at this Day. The Virtues ascribed to it, are, that it is hepatick, diuretick, and attenuates, opens, and absterges; and therefore good in those Diseases where the black Choler prevails. It is a great Strengthner, and, when it is good, is efficacious in the Black Jaundice and Whites in Women, both which Distempers proceed from Weakness. In the latter Case, it is prescribed to be boiled in Mint-water.

Cortex Winteranus, or Winter's Bark, is a Kind of wild Cinnamon. It is sometimes writ *Canella Alba*, or white Cinnamon. It has a Flavour somewhat like Lemon-peel. Though it is not much used in the Shops, yet when an Infusion of it is given to any Patient, the Nerves are presently sensible of it. It is of good Use as an Antiscorbutick.

Cortex

Cortex Capparis, or the Bark of the Caper Plant, has been often used in Medicine, being infused in Wine, as an Aperient and Diuretick, but is now of very little Use in the Shops, because we find others that are more prevalent in those Cases.

Cortex Granatorum, or the Shell of the Pomgranate Fruit. This Fruit is very frequent in *France*, and sometimes ripens in *England*, especially at Sir Gregory Page's, and Mr. Mollineux's, at *Kew-Green* in *Sur-rey*. The Flower of this, is the *Balaustium*, which I shall have Occasion to mention, when I speak of the Flowers of Plants, but the Rind, or Cortex of the Fruit, is what I shall mention in this Place. It must be dry'd and pulveriz'd, and may be given in such Cases where Blood flows involuntarily from any Part. It is a powerful Styptick, and may be given in Fluxes of all Kinds.

Cortex Esulæ is of two Sorts; the one taken from the Root of a Plant which is called *Palma Christi*, or *Cataputia major*, which is a *Ricinus*; and the other from
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the Root of a Spurge, or Tythimal. Their Virtues are nearly the same, having both very violent purgative Qualities, and sometimes prove powerful Emeticks. The smaller Sort, which is the Spurge, is called *Lachyris*. They are seldom in Use among the regular Practitioners at this Day, being thought too violent in their Operations; however some Empiricks do not now scruple to venture on them. But whoever uses them must do it with Caution.

Cortex Citri, or Lemon-Peel, as well as that of Oranges or Citrons, the last of which is only a larger Sort of Lemons, are much of the same Use in Medicine: Every one of them being chiefly used as bitter Aromatics, and Strengtheners of the Stomach.

Cassia Ligna, or the more woody Bark of a Tree, which seems to consist of such Virtues as we find in Winter's Bark, and the Bark of the true Cinnamon; and it is called the white Cinnamon, or *Canella Malavérica & Javonensis*, whose Leaves are the officinal *Malabathrum*. It is really the paler Kind of Cinnamon, and taken from the

younger Branches of the Tree, though some would have it to be a different Sort from that which they bring from the Island of *Ceylon*. We may be assured that the Cinnamon which comes from *Ceylon* is only different from it by Means of the drying, and the Part of the Tree it is taken from. The *Ceylon* Sort is the under Bark of the Stem of the Tree, and being in a much warmer Climate than *Malabar*, is much quicker dry'd.

They have both the same Effects; they are both strengthening, and good against all Fluxes, and particularly in Seminal Weaknesses. We may observe however, that when we boil it, after a long Time, it will produce a kind of Jelly, which the Cinnamon will not be so apt to do: That from *Malabar* being taken from the young Branches of the Trees, abounding in more viscous Juices than the Cinnamon of *Ceylon*, which is taken from the old Body or Trunk of the Tree. And besides, as the Climate of *Ceylon* is hotter than that of *Malabar*, whatever Viscosity might be in the Bark of the

the Cinnamon growing there, would be much sooner dry'd up, than in that of the *Malabar* Kind. I have seen Trees from both Places and they are the same.

OF WOODS.

THE *Lignum Santalum Album*, or white Saunders; the *Lignum Santalum Citrinum*, or yellow Saunders; and the *Lignum Santalum Rubrum*, or red Saunders, are all Woods nearly of the same Virtues, and are frequently found in the Shops.

The yellow is accounted the best, being more Aromatick than the other Sorts, and is generally most used in Dyet Drinks, tho' the red Sort is more astringent and drying, and will also yield a good red Colour in the Liquors where it is infused; these are all used as Antiscorbuticks.

Lignum Lentiscinum, or *Lentiscus* Wood, is of the same Tree that bears the Gum Mastick. It is used like the Saunders: in Diet Drinks, as an Antiscorbutick; but as

it abounds more than the former in Ter-
bentine Juices, so the Liquors compos'd of
it operate chiefly by Urine.

Lignum Aspalathum, or Asphalt, & *Rose-wood*, for there is hardly any Difference between it and *Lignum Rhodium*: I find their Virtues the same, and tho' some receive them as different Woods, they are certainly from the same Tree, but from different Parts of it, like the Cinnamon and the *Cassia Ligneæ*, as I observed in the foregoing Lecture. The *Lignum Aspalathum* is however accounted astringent and drying, and, from its Scent which the Oil made of it gives us, it is reckoned Cephalick, as well as the Oil of *Rhodium*, and is therefore chiefly put into Pomatums to make them more agreeable to the Smell.

Lignum Rhodii I have mentioned above, as much as is necessary to be said of it, unless that it may be reckoned among the Perfumes.

Lignum Colubrinum, or Snake-Wood, is the Wood of the Tree which brings us the *Nux Vomica*, the Nut of which is a strong
Poison,

Poison to Dogs and Cats, and is used by the Rat-Killers with Arsenick mixed in Butter, to lay about Houses to destroy the Vermin. A strong Tincture taken from the Wood, is so powerful a Narcotick, that it is very seldom used in the Shops. With a Paste made of this Decoction flung into Ponds or Rivers, the Fish become so much intoxicated, as to rise to the Surface of the Water, and apply themselves to the Shore, where they are easily taken out.

The Seeds likewise of the *Cocculus Indus* broken and made into a Paste will do the same Thing; and it is to be noted that the Staves-Acre Seed in particular being broken, and mixed with Oil or Butter, makes an excellent Unguent to be applied where that Distemper reigns which is called the lousy Distemper.

Lignum Guaiaci is a Wood of a tall *West-Indian* Tree, which I mentioned when I spoke of the Gum in a former Lecture. We use it in Decoctions as a Diet Drink, in the *Morbus Gallicus*, Evil and Scurvy; it being a Dryer, and a great Corrector of sharp Hu-

I mours

mours in the Blood. It is to be noted that in *America* where the *Indians* are subject to the Pox, this Wood, as well as its Gum, are esteemed Specificks in that Distemper, and they therefore call it Pock-Wood.

Lignum Aloes, or *Agallochum*, or *Xylo-Aloes*, in *English* called Aloes-Wood; is so light as to swim in Water, and the best of a Purplish Colour. 'Tis brought to us from the *East-Indies* in small Pieces or Chips; its Powers are hot and drying, and an Extract made of it with Spirit of Wine is esteemed a great Strengtheners of the Nerves by all Physicians.

Lignum Juniperi, or the Wood of Juniper is accounted Balsamick, as are even the Leaves of the Plant, and the Berries. A Decoction of this Wood is Diuretick, and is frequently used to purge the Reins: But the Berries are supposed to have a more powerful Effect, either by having their Juice expressed, or if they are distilled. The Oil above all the rest is chosen in Cases of the Gravel and Stone, but that must not be given in any greater Quantity than three or
four

four Drops at a Time, in a proper Vehicle.

Viscus Quercinus, or as some Authors write it, *Viscum Quercinum*, is the Mistletoe of the Oak, whose Fruit is ripe about *Christmas*; but the Mistletoe of the Oak however is rarely found now-a-days, I suppose, because it has been so constantly sought for, while Mistletoe growing upon other Trees has been neglected, notwithstanding its Virtues are as great when it grows upon one Sort of Tree as upon another. Wherever we find it, we may be sure it is good in all Hysterick Disorders, or in most nervous Cases. In Paralytic Cases 'tis extraordinary, and in Convulsions of great Use.

I suppose the chief Reason of writing for it under the Name of *Viscus Quercinus*, is because the Oak in the Time of the *Druids* was dedicated to *Saturn*, and was the Place of Worship, as a Temple. And as the *Saturnalia*, or Feasts of *Saturn*, were kept about the Time of our *Christmas*, when that Tree was vacant of Leaves; so the Country People brought thither all the Ever-Greens

they could pick up, to adorn the Oak, amongst which Mistletoe was the chief, it having then its Fruit in full Perfection; and though the Mistletoe they brought might be gathered from Trees of different Kinds, by its being lodged upon the Oak by Way of Ornament, it might take its Name, as we write now for it to the Shops, *Viscus Quercinus*.

By the Accounts we have of the *Druids*, we may easily conjecture that they were good Physicians as well as Priests, and understood the true Virtue of the Mistletoe, as well as the other Ever-Greens that were hung about the Oak, as well as they had a good Knowledge of the several Parts of the Oak it self. For we find more useful Things from that Tree handed down to us, than from any other. The Bark in Intermitting Fevers seems to have been used by them as we do the Jesuits-Bark: The Oak-Berries have been said a long Time to be both Styptic and Cordial: The Galls of the Oak, or Oak Apples, have of long Date likewise been accounted Styptick and Balsamick. The
Oak

Oak Leaves have an Astringency in them, and a Decoction of them, we read, has been applied outwardly to the Body in cutaneous Cases: And the Acorns of the Oak dry'd and pulveriz'd, we find, have been of great Service in the Cholick. And were we after this to consider the Number of Evergreens which adorn the Oak in the Winter Season, such as the Juniper, the Bay, the Cypress, the Box, the Ivy, the Holly, &c. we might look upon one of these Temples to possess every Thing that they then used in Physick: So that the Mistletoe, which seemed to be the Supreme of the whole, as it was then in its fullest Perfection, and by which the *Druids* could cure Convulsions, Epilepsies, and such like Distempers; 'tis no Wonder that we have still sought after the Mistletoe of the Oak, and preferred it to that of another Tree.

Sir *John Colebatch*, who has distinguished himself particularly by writing a Treatise on the Mistletoe, and the Virtues of it, has in his last Edition agreed with me, that the Mistletoe of one Tree has the same Ef-

fect with that which grows upon another, as well as that an Handful of any Herb growing upon one Soil, is equal in its Virtues to an Handful of the same Plant growing in another Soil: So the Mistletoe which grows upon any Tree possesses still the same Virtues, as if it grew upon an Oak. For every sort of Tree to the Mistletoe is no more than a different Soil to any other Plant.

The Bird-Lime, which was heretofore used, was made of this Viscus; but since it has become more scarce, the Inner Bark of the Holly or Holme, is used instead of it.

The Way of using it in Medicine, is to dry it, and pulverize it, and when the Powder is reduced as fine as possible, one may give a Dram for a Dose twice or thrice a Day, in some of the Hysterick Waters, which, as far as I have observed, never fails of curing the most stubborn Convulsions in young Persons.

But if any may be of Opinion that yet it is necessary to use that Mistletoe which grows upon an Oak we may propagate

it

it upon that Tree, if we take the Berries when they are ripe, and press them till the Seeds, and the viscus Matter about them, come out: Let this be done against any tender and smooth Branch of the Oak, and the Seed will adhere to it. The Spring following, if the Birds do not gather it before that Time, the Seed will take Root in the Branch that we placed it upon, and make a small Bush that Year, and in two or three Years more begin to bear Fruit.

R O O T S.

R *Adix Aristolochiæ rot.* or *Round Birthwort Root*, has an aromattick Taste, and is somewhat acrid: It is accounted among the Physicians a great Cleanser of the Womb, and to help Delivery; therefore is used much to promote the *Catamenia*. When we use it externally, it is accounted detergent and separative, which makes it an Ingredient in most of the styptick Plaisters.

The long-rooted Sort has the same Qualities as the former, and is frequently used in lieu of it.

Radix Chinæ nodosa, or the knotty *China* Root, or the Occidental *China* Root, has the same Virtues with the oriental *China* Root. The first is the Root of a Plant called *Smilax aspera Chinenfis*, *Lampatam dicta*; and the latter is the Root of the *Smilax Viticulis asperis Virginiana*. The Root is white and spongy. Either of these are used in Decoctions, and are accounted diaphoretick. The Decoction of it is given in *Gonorrhœa's*.

Valeriana, or *Valerian*. Of this there are several Kinds, but only one in Use, which is called the *Sylvestris major foliis angustioribus*, and is intended in most Prescriptions. It is warm and aromatick. Its Efficacy, as a Sudorifick, is supported by the Testimony both of the ancient and present Practice. It has been reckoned by some deterfive, so much as to make it diuretick, and good in all Obstructions of the *Viscera*. It is mightily extolled by some for strengthening

ning the Optick Nerves, and restoring decayed Sight. It is extraordinary in hysterick Affections, and Convulsions. It is sometimes used with Camphire.

Bryonia Alba, or White Briony.

Curcuma, or Turmerick.

Hermodactylus.

Jallapium, or Jallap.

Mecoacan, or Mecaocan, and likewise Mecoacana.

Rha Barbarum.

Rha Ponticum.

Rubia Tinctorum, or Madder.

Serpentaria Virginiana.

Turpethum, or Turbith.

Squilla, or Sea Onion.

Schænanthus, or Camel's Hay.

Stæchas Arabica, or Arabian Lavender, or, as some call it, French Lavender.

Agaricum, or Agarick.

Cassia Fistularis, or the Pudding Pipe Tree.

Colocynthis, or Coloquintida.

Alkekengi, sive *Halicacabum*, or the Winter Cherry.

Vale-

Valeriana, or Valerian, has been used in the Shops for many Years, and has been often prescribed by the Physicians as a good Aromatick, as a Sudorifick, good in all Obstructions of the *Viscera*, a Cephalick, and greatly tending to strengthen the Optick Nerves, or any Weakness in the Eyes. In hysterick Cases it has been highly commended, as likewise in Convulsions; but we have not been fortunate enough till of late to have used the most prevalent Sort. We are obliged to Dr. *Douglas* for the first Discovery of that which now seems to carry the Fame with it; for there are many Varieties of it. It has been thought by some, that what we call the *Greek Valerian*, was meant by *Theophrastus*, and has therefore bore that Character; but we find plainly, that it was not so, since we have try'd the Effect of that discovered by the Doctor before mentioned.

This Plant we find commonly in the Woods, and on the Sides of wet Banks. About *Cambridge*, where it is now frequently gathered, 'tis hot in the Mouth, and

and is esteemed a good Alexipharmack; and its Odor is not unlike Violets.

Ipecacuanba, or the *Indian Vomitting Root*, is a small Plant growing in *Virginia*, *Carolina*, and other Parts of *America*. This is one of the most easy Emeticks that is given by the Physicians: It was brought to us first by one of the *Spanish* Missionaries into *Italy*, and always given by him infused in common Water, to those who had been troubled for a long Time with the Bloody Flux. Since that Time, it has gained great Reputation in *Europe*, but particularly in *England*. The late Dr. *Gibbons* with us, was the first that used it, and had so much good Success with it, that every Physician has followed him in prescribing it where the harsher Emeticks could not be well given; but lately the Powder of it has been made into a Bole, and given, to the Quantity of a Scruple at a Time.

It has been supposed, and even at this Day is guess'd, to be the Root of an *Apo-cynum*, or Dog's Bane; and a learned Physician would endeavour to prove that it is the

the Root of such a Plant; but we have had three Sorts in *England*, two of which do not appear to be so. The best of the Kind is a grey Root, the other is more inclining to a reddish Colour, and the third is black, but very violent in its Operation; so that the Physicians have rejected it, as a real Root of an *Apocynum*. Those who have taken of the latter, have seldom lived; and we see now no more of it in the Shops.

The Method prescribed in the Use of the Root by the Missionary who first brought it into *Europe*, was to pulverize it to about the Quantity of a Dram, and without separating the ligneous Parts from the cortical; infuse that Quantity of Powder in Half a Pint of common Water for eight Hours, stirring it once or twice, and in the Evening, which he thought the best Time for taking this emetick Dose; pour off the Water clear from the Powder, and the Patient then to drink it, working it off with a thin Gruel. This Dose is for a grown Person, and Half the Quantity infused in Water for Half the Time, may be given

given to a Child of ten Years old; or even the same Dose infused as before-mentioned, may be given to Children of three or four Years old, as I have experienced.

This is much more gentle in its Operation than to give it in the Powder, and the Powder is hardly ever given, but in Cases of the greatest Necessity, and then in the Dose which I have mentioned before, sifted and divested of its ligneous Parts; so that it has only its resinous Parts remaining, which are always the most active in this Way, as we find by making the Analysis of it, according to Mr. *Bolduc*, of the *Royal Academy of Paris*, and my own Experience; but when both the cortical and ligneous Parts are together, I find that the Infusion carries several good Consequences with it: For that does not only prove an Emetick, at the Time we take it, but an easy Cathartick, and Diaphoretick at the same Time, as well as a Diuretick; which is enough to say of this Root.

Sigillum Solomonis, or *Solomon's Seal*, is a tuberous Root, which in all Bruises of the Body,

Body, when it is broken in a Stone Mortar, and made into a Cataplasin, or Pultis, and applied to the bruised Parts of the Body, will in a few Hours remove that Blackness which would otherwise remain for many Days.

Radix Consolidæ, or the Comfrey Root, has been held in great Esteem of long Date for being a Strengtheners, and especially in feminal Weaknesses, such as in the Whites in Women, or in Gleets that have been of some Duration, where there is no Virulency. The Root is generally boyld in Water, to a thick Consistence, which may be given warm; and it is likewise given to those who are troubled with Ruptures in the Testicles, with good Success.

Epithymum, or Dodder of Thyme, or the *Cuscuta minor* of C. B. We have a major Sort, but they seem equally to carry the same Characters or Powers in Physick, it is judged to be a warm Cathartick, because it is believed that it purges Melancholy, but by what I understand of it, it seems to be alexipharmack. It has sometimes been pre-

scribed

scribed for cleansing the Blood, and regulating the Body, so as to prevent Infection, and for curing cutaneous Eruptions. For my own Part, I have not easily found this super Plant; for it is like the Mistletoe, growing upon other Plants, and not a Plant properly of it self.

Semen Bardanæ, or Burdock Seed, is counted a good Pulmonick, Diuretick, and Diaphoretick: It is sub-astringent, and is used in the Cure of great Wounds.

Semen Sumach, or Sumach Seed, is drying and astringent. We may take Notice, that this Seed comes from the same Tree which is called *Rhus Obsoniorum*, and produces the Gum Copal.

Semen Cardui Benedicti, or Carduus Seed, or the Seed of the Holy Thistle, is an Alexipharmack and Sudorifick. It is of great Use in Intermitting Fevers.

Semen Levistici, or Lovage Seed, is a good Alexipharmack, and is sometimes used as a Substitute for the Seed of Angelica and that of the *Imperatoria*; so that it may serve instead of these, to cure the most violent

violent Cholick: 'Tis likewise Diuretick, and I may observe *en passant*, that as the Seed is used as a Substitute for the Angelica and the Seed of the *Imperatoria*, I suppose that the Roots of every one of them would have the same Effect in that Degree, as the *Astrantia* or *Imperatoria* would have, if they were boiled in White Wine: The last of which was the famous Root that Mr. *Petiver* used in his Composition that was so certain and immediate in curing the Cholick.

Semen Rutæ, or Rue Seed, is Alexipharmack, Cephalick, and good where the Nerves are weak. 'Tis likewise of Use where the Cholick prevails; it was held in the Time of the great Plague, to be good against Infection, and is an excellent Alexipharmack.

Semen Carui, or Caroway Seed, is Carminative, and Diuretick and Cephalick.

Semen Napi dulcis, or Turnip Seed, or Navew-gentle; it helps Digestion, absterges, and is helpful to the Stomach, and may

may be used in the same Manner as we do Mustard-Seed.

Semen Lupini, or Lupin Seed, makes one of those Applications which we use in Gangrenes, and malign Ulcers: It has an Astringency in it, and is yet Diuretick.

Semen Lini, or Lint Seed, or Flax Seed, is full of Oil, which being expressed, is given as a Remedy in Catarrhs, Coughs, or other such like Distempers of the Lungs: It is also a gentle Diuretick, and conveys so many of its oily Parts to the Kidneys, that when they are ulcerated, it is of good Use.

Semen Limonum, or Lemon Kernels, or Citron Kernels, for they are both the same, are warm, attenuating and drying: They destroy Worms in Children.

Semen Acetosæ, or Sorrel Seed, is helpful in Fevers, as being possessed of a little Share of the Diaphoretick and Diuretick.

Semen Pæoniæ, or Male-Piony Seed, is an excellent Cephalick, and is extraordinary in all Weaknesses of the *Uterus*, and Obstructions of the *Menses*.

Semen Dauci Cretici, or Wild Carrot of
K. Crete

Crete: This is a Diuretick, and one of the best Uterine Medicines where the *Menses* are not regular, and is given where there happens to be a Suffocation of the Womb. 'Tis likewise good for those Women who are troubled with what they call the Vapors.

Semen Erucae, or Garden Rocket, is warm and used in Apoplectick Cases. It is an Alexipharmack, and said to promote Venery.

Semen Petroselini Maced. or *Macedonian Parsley Seed*, is good to assist the *Menses*, and is very Diuretick.

Semen Agni Casti, or the Seed of the Chast Tree, is of the same Nature of Camphire, both of which are said to be refrigerating, and therefore have been commended to prevent Lust: But on the contrary, it is known that those who prepare Camphire in Abundance are noted for having many Children: It is likewise to be used as Camphire, in any Case where the Blood is inflamed.

Carda-

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Cardamomum, or Cardamom. The Cardamoms used in the Shops are of two Sorts, viz. the Greater and the Lesser. The first, i. e. *Semen Cardamomi majoris*, or the larger Cardamom Seed, is Aromatick, and a great Dryer; it attenuates, and is a great Recreator of the Spirits. 'Tis likewise Diuretick, and promotes the *Menses*. It is of Use likewise in any hepatick Obstructions, and helps the Lungs; but we don't find this frequently in the Shops. The other which we call *Semen Cardamomi minoris*, or the smaller Cardamom, is brought to us from *Malabar*, and other Places in the *East-Indies*: It is Aromatick, and carries the same Virtues with the former; either of them may be used in Infusions.

Semen Saxifragiæ, or Saxifrage Seed, grows with us in the Fields: Being reduced to Powder it is an excellent Discutient, and is of extraordinary Efficacy in the Cholick.

Semen Thlaspios, or Treacle-Mustard Seed grows with us: It is a Seed of a sharp Taste, and is a Dryer. There is one Sort of it which we call *Bursa Pastoris*, or Shepherd's

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Purfe: It is given in Diarrheas, Dysenteries, and is of great Use in Hæmorrhages.

Semen Cymini, or Cumin Seed, is used as a Carminative in the Cholick, in the Dropsy, and likewise as a Cephalick.

Semen Ebuli, or the Dwarf Elder-Berry, has much the same Virtues with the common Elder-Berry. It is of Use in Dropsies, and the Gout, or any other Distemper, where there is too much Serum.

Semen Bombacis, or Cotton Seed: An Infusion of these are said to help the Lungs, but are now seldom used.

Semen Petroselinæ vulg. or Parsley Seed, is Carminative, Diuretick, and Diaphoretick.

Semen Coriandri, or Coriander Seed, is Cephalick, Alexipharmack, and Diuretick.

Semen Angelicæ, or Angelica Seed, is Alexipharmack, Diuretick, and Cephalick.

Semen Basilici, or Basil Seed; though it is yet in the Shops, it is too strong a Hypnotick to be used, and hurts the Eyes very much.

Semen

Semen Milii folis, or Gromwell Seed: 'Tis a Diuretick, and Diaphoretick, and is said to purge the Reins in a more gentle Manner than the others above.

Semen Genistæ, or Broom Seed: This when it is roasted, as we do Coffee, being ground to Powder, and infused, is a good Help to those who are troubled with the Gravel.

Semen Fœniculi dulcis, or Sweet Fennel Seed, is used as a Carminative, or Diuretick and Cephalick.

Semen Colocynthis, or Coloquintida Seed, is used to purge the Brain and Nerves of cold Humours. The most remote Parts of the Body are soon sensible of its Effects: We give it in Apoplexies, Epilepsies, Vertigo's, Asthma's, and any other Distempers that proceed from Cold: It is likewise a Favourite with many Physicians in the Dropsy.

Semen Psyllii, or Flea-wort, is of Use in the Yellow Jaundice, in Dysenteries, and is highly commended by most Physicians in either of the Cases.

Semen Moschi, or Mosch Seed, comes from the *West-Indies*, as likewise from some Parts of *Africa*. It is used as a Carminative and a Cephalick; being infused as the other Seeds before-mentioned.

Semen Anisi, or Anise Seed, grows in many of the South Parts of *England*. 'Tis a Diuretick, Cephalick, and Carminative.

Semen Santonicum, or Worm Seed, is one of the best Medicines that is used for destroying of Worms in human Bodies.

Semen Apii, or Smallage Seed, is used as a Diuretick, a Carminative, and is not a little Alexipharmack.

Semen Cicborii, or Succory Seed, is used with other of the Carminative Seeds to abate your too violent Powers: It is Diuretick, and a good Hepatick.

Semen Hyoscyami, or Henbane Seed, is cooling, and an Emollient.

Semen Lactuca, or Lettice Seed, is an Opiat; and is Diaphoretick too.

Semen

Semen Papaveris Nigri, or Black Poppy Seed, is a Narcotick, or Hypnotick, or Anodyne.

Semen Anethi, or Dill Seed, is Alexipharmack, and Diaphoretick, as well as Diuretick.

Semen Carthami, or Bastard-Saffron Seed, has been heretofore esteemed as Cordial, but is now of no Use in the Shops.

Semen Cochleariæ, or Scurvy Grass Seed, is frequently infused, or a Decoction made with it, as an Antiscorbutick: It is Diuretick and Diaphoretick.

Semen Portulacæ, or Purslain Seed, refrigerates or cools the Body: It is likewise Diuretick in a small Degree.

Semen Cydoniorum, or Quince Kernels, have a Stipticity in them, and are sometimes in Decoctions given in intermitting Fevers, as a Febrifuge: They are Dryers and Astringent.

Semen Urticæ, or Nettle Seed: A Decoction of these may be made in the most Simple Water we can get, about four Pound of Seeds to a Gallon of Water, and boiled

K 4 till


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till it loses a third Part, and then pass'd through a Sieve: A large Spoonful of this Liquor given in White Wine or Ale, and repeated three Times in a Day, has cured two of my Acquaintance of the Rheumatism, by following such a Course for a Month. The Nettle Seed is also accounted an excellent Antiscorbutick, and may be given to those who are troubled with the Evil; 'Tis Diuretick and Diaphoretick.





Of Insects, Quadrupeds,
Fowls *and* Birds *used in*
Medicine.

HE *Hirudo* & *Sanguisuga*, or the Leach, has formerly been more in Request than it is at present, since the Art of Cupping has been in Practice. We use them to draw out Blood from the tenderest Parts of the Body, where a Lancet by an unskilful Hand may prove dangerous, or cannot be so well commanded. We find these Leeches in watry Ditches: They are of the smaller Sort, and must be always kept in Water, and are therefore in most Apothecaries Shops: They presently take hold of the Part they are applied to without giving any Pain, and will remain there
till

till they have filled themselves with Blood, and then drop off: They must then be put into a Bason and rubbed with Salt, which will make them disgorge that Blood they had received, by which we may guess what Quantity we take from the Patient; then wash them clean from the Salt and they will serve for Use another Time.

Lumbricus Terrestris, & vermis Terrestris Officinarum, or the Earth-Worm, is so well known that I need not explain its Figure: In its Use it proves very Diuretick, Diaphoretick, and Anodyne; it is a Discutient and Emollient: It is good in Apoplectick Cases, and where the Muscles or Nerves are affected; in the Dropsy, in the Cholick, and in the Scurvy it has been used with good Success.

Araneus, or the Spider. The Use of this Creature alone is trifling, unless, as some would have it, to sow one of 'em up in Silk, and hanging it about the Neck of a Child, it prevents Bleeding, and cures an Intermitting Fever: But I am persuaded we have much better Remedies, for I have very little

tle Faith in this. 'Tis, as I suppose, a Charm like some others I have mentioned in former Lectures: But the Web of this Spider, which is of that Sort which we generally find in Houses, is astringent, and will stop Bleeding, if applied to the Wound. The Silk or Thread which this Sort of Spider makes, has been spun in *France*, and woven into large Pieces, by a Gentleman of the Royal Academy at *Paris*, who bred them one Year in as great a Quantity as other People do Silkworms, and had them fed as regularly. The Food he gave them was raw Flesh. The Stuffs woven with this seemed to be stronger than those made of the Silk of the Silkworm, though not of so good a Gloss. We have now in the *Museum* of the Royal Society, a Stocking knit of this Silk.

Scorpio Offic. or the Scorpion, is of no other Use at present but to produce an Oil, which is said to be good for the Bite of any venomous Creature, but more especially to be applied to the Wound which it has it self given to any Animal with its Sting.

Sting. It is almost like a Cray-Fish, but has a knotted Tail as long as its Body, with a Sting at the End of it: 'Tis found in all hot Countries, but is not in *England*, excepting only in the Cabinets of the Curious.

Aselli, Millepedes, & Omisci, or Wood-Lice, Sow-Bugs, and Itch-Bugs, is an Insect with many Feet, jointed and covered with a Shell of some Hardness: 'Tis found in old Walls near the Earth, and dry Banks; when we touch it, it rolls it self up in the Shape of a Ball, and is of a Lead Colour: It is a good Diuretick, and is given in the Strangury, in the Case of Gravel or Stone, and in the Asthma. It is also highly commended to help the Eyesight, and where the *Menses* are obstructed: 'Tis likewise good in any Case where the Nerves are weak.

Apes, or Bees, have formerly been used themselves, but at present are left off; however their Honey and Wax are now of frequent Service in the Shops; The Use of the Bee alone was to powder it, and give it
in

in any proper Vehicle to promote Urine: It is in a small Degree of the Nature of Cantharides.

Honey is nourishing, helpful to the Lungs, provokes Urine, and is especially of Service in Catarrhs or Coughs.

The Wax is somewhat warm, absterges, and is a Drawer.

Bombyx offic. or the Silk-Worm, besides the Use of its Silk, being dried and powdered, is of great Use in Convulsions and Vertigo's; and when we use the Silk it self, or the Silk-Cases, we must take great Care that none of them contain any of the dead Worms in them. The Chymists draw a fine Spirit from Silk, but it is seldom prescribed by the Physicians.

Cantharides, or *Spanish Flies*, seem to be Gold and green shining together on the greatest Part of their Body; we have here and there a little Mixture of yellow and some red: Being broken or powdered they are corrosive, and are used to raise Blisters, but in many Constitutions where they happen to be applied in that Manner, the

Strangury will insue; especially where the Discharge of serous Juices is too great: But however it be, such Applications are necessary, when a Patient proves delirious, as it frequently happens in high Fevers, and then we ought not to spare them, especially about the Arms, Legs, and even the Top of the Head it self.

For gross Persons find frequently Mortifications from those that are put on the Back, if they lie long in their Bed.

The Powder of *Cantharides* has been formerly recommended to be given with Camphire in Pills, as a powerful Diuretick, and to excite Venery; but they inflame the Kidneys, and the Bladder, so that they sometimes prove of very dangerous Consequence: They are so stimulating, that whenever we give them inwardly, it must be in a very small Quantity, and attended with Broths and Emulsions.

Cochinilla & *Coccinilla*, or Cochineal, is brought to us from the *Spanish West-Indies*: It is a very dear Commodity, as it is used in dying of Scarlet, and for the making of
Garmine,

Carmine, one of the richest Colours the Painters use: It is but lately that we have discovered it in *South-Carolina*, and I have had as good from thence given me by Governor *Boon*, as that of the *West-Indian* Growth. It is an Insect almost like the *Lady-Cow* when 'tis full grown, but as we receive it, it is only the Chrysalis of the Insect, or in the same State the Silkworm is, when it is inclosed in its Bag. It feeds upon the *Opuntia*, or *Indian Fig*, when it is in its *Nympha* State; but when we have it gathered for us abroad, it is somewhat inclosed in a Silken Web, which is separated from the Insect by Fire, which they blaze about the Plant till these Insects all fall to the Ground; they are then gathered together and sifted, to discharge them of the Dust.

This Method of curing them was first taught to Governor *Boon* by a Slave that had been a long Time in the *Spanish West-Indies*, and was there employed to gather *Cochineal*, and was the first that discovered it in *Carolina*, as the Governor told me, who at the same Time gave me some of the *Carolina*

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rolina Sort, which I tried and found to be as good as any that I had seen; and moreover, we may observe that by the Order of the Council, a Pound or two of it was used by a noted Dyer, and proved extraordinary. In the Collection which Doctor *Douglass* has got together of *Materia Medica*, we find some of the Flies perfect among the Cochineal: It's Use in Medicine is Alexipharmack, or Sudorifick, and therefore given in Fevers.

It is to be noted, that the *Proscarabeus* or Oil-Beetle, as well as all the Insects which have cased Wings, of a hard Texture, have nearly the same Effect one as the other, *i. e.* when they are pulverized; *i. e.* They prove Diureticks in a more or less Degree, and are somewhat tending to the Nature of *Cantharides*: But these are seldom called for in Medicine.

Sepia, or the Skuttle-Fish, is found upon our Sea-Coasts plentiful enough: It is almost of the Form of a Spider, and so large, that the Bone taken out of its Body will sometimes

times measure six or seven Inches in Length.

This Bone which is the Part we use, is flat, white and thin, much in the Shape of what the Stationers call a Folding-Stick. It has had many Virtues ascribed to it, which I shall forbear to mention, and only give those which are approved at present, that it is a Dryer and absterges: 'Tis Diuretick, and is helpful in *Gonorrhœas*; so likewise is good in watry Eyes.

Cocblea Terrestris, or *Limax Terrestris*, or the Snail, is a Creature well known to every Body: It consists of viscous Juices which cannot be frozen in the most violent cold Weather, no more than any other viscous Matter; as the Mistletoe Fruit for Example, which ripens at *Christmas*: The Snails will however retreat to Holes in Walls, as well in the Winter as the Summer Season, and seldom appear abroad but in rainy Weather, when they come out chiefly to search their Food; for in dry Weather they cannot move from Place to Place without being choaked or suffocated,

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or

or else the viscus Coat of their Bodies would be so much dry'd up, which viscus Matter they continually emit, that without Moisture they could not live. They have Teeth in the Upper Jaw to scrape the Fruit or Leaves they feed upon, but seldom the Vessels of any Consequence: If we take off the Shell of a Snail carefully, we shall see that the Heart, which is on its left Side, will beat much slower than that of any Animal we know. 'Tis remarkable too that the Snail, as well as the Earth-worm, is Androgynous, which is as much as to say, that each one possesses both the Male and Female Powers.

The Use we make of them in Physick is of good Moment: They consolidate, are Lenitive, and are helpful to the Nerves and to the Lungs, therefore are given to Consumptive People; so are they likewise of Use to those who have any Excretion of Blood; when we give them in Milk especially, they prove a Restorative: They are likewise bruised of great Service, if we apply their viscus Parts to small Wounds,
especi-

especially boiled in Water, till it comes to a tolerable Consistence. These have been neglected a long Time in the Shops, but are pretty much used and recommended by the Physicians.

Blatta Byzantina, or *Unguis Odoratus*, or Sweet Hoof of *Constantinople*, is good to correct the Spleen, by discussing vitious Humours. In external Use it helps the Oppressions of the *Uterus*: This is the Hoof of an Antelope, but is now seldom used.

Ostreum, or the Oyster, is said to be of an invigorating Quality, *i. e.* the Fish it self, but the Shells when they are cleaned, calcined and powdered, are equal in their Virtues to any Pearls powdered. Mr. *Petiver*, who was a famous Apothecary in *Aldersgate-street*, and of the Royal Society, well known to the Curious, told me that the best Way of reducing this Powder to the fineness we would have it, should be to beat it, and fling it into a Pail of clear Water, stirring it as we fling it in, 'till it becomes white, and in a Minute to pour off the Top and

let it settle; then pour that Water off the Sediment, and put that which remains in the Bottom, into an Oven to dry, and beat it again in the Mortar till 'tis reduced as fine as we would have it.

The remaining Part may be used in the same Manner, and may be reduced till 'tis as fine as the first: I need repeat no more of its Virtue, but place it among the Testaceous Powders.

Mater Perlarum, or Mother of Pearl, has no more in it than what we have said in the foregoing; for it is a Sort of an Oyster.

One might bring in the *Mytilus*, or Muscle, the *Concha Off.* They all carry the same Powers under different Characters.

Anguilla Offic. or the Eel, is what we call a Fish, because it lives in the Water, either in the Rivers, Pools, Lakes, or Ponds: We have many odd Stories of this Creature, that at some Seasons it will leave one Pond for another, even so as to cross a Meadow Land in Dewy Mornings: For they

they are viscous on the outside as the Snail, and cannot travail in a dry Season. We frequently find Eels in a Year or two after we have made a fresh Pond; one Instance is in those made at *Navestock* in *Essex*, at the Seat of *Aaron Harrington* Esquire, where, after two Years, he took out from fresh Ponds, made in his Lordship, several Eels of a considerable Size, notwithstanding he had made all the necessary Guard he could against them, coming from other Ponds which lay above him, and which yet never were known to overflow.

Some suppose that Eels have a spontaneous Generation, as we have read that Horse-Hairs will produce Eels; and that has been one Reason, I suppose, that equivocal Generation has been so much encouraged: But there is a great deal of Difference between the Viviparous and Oviparous.

The Eel, and the Coney-Fish, which is another Sort of it, are, like the Viper, Viviparous, and give us about *Christmas* their young ones, small as Hairs; and there is never any Spawn or Eggs found in them.

The Fishermen about the *Buoy* of the *Nore* meet with the Coney-Fish plentifully about the End of *December* full of Young: All the Eel-like Tribe seem to be like Earth-Worms or Snails, Androgynous, and if we cut them to Pieces we shall find Life to remain a long Time in every Part in either. Doctor *Tyson* makes the Viper to be Androgynous, as appears by his Account of it in the *Philosophical Transactions*. The Earthworm we know to be so, as any one may observe in the Month of *May*; and the Doctor's Observations upon the Rattle-Snake in that Way, shews that it is still Androgynous as the Viper or Earthworm. The Eel from its viscous Parts is esteemed a Vulnerary, especially it is good for those who are troubled with the Gravel: 'Tis quick of Digestion as the Viper is, but carries along with it a more viscous Juice. The Viper indeed more immediately penetrates the Reins, or furnishes them with healing Matter, than the Eel; and the Earthworm last of all has an Effect of that Nature much more gentle.

We

We may observe that all Creatures that carry a viscous Matter, are nearly of the same Use in Physick; excepting that one has more or less Power in its Action.

It is observable that the Heart of an Eel cut from it with the Head without wounding, will retain Life and Motion for two Hours; and I have seen the other Parts of an Eel's Body which have been separated for that Time, shiver or tremble upon the Touch of a Pin; but we must try this Experiment when the Eel is fresh taken from the Water.

We may yet say of the Eel, that it is a good Restorative, and is a good Food for those that are Consumptive.

Ichthyocolla, or the Isinglass-Fish, is generally found in large Rivers: Of this Fish is made the Glue called *Ichthyocolla*, or Isinglass. This is made by cutting it in small Picces, and boyling it gently in a sufficient Quantity of Water, 'till it is come to a due Consistence: It is a Dryer, and helps to thicken the Blood: It is likewise said to be good for those Women that are troubled

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with the Whites: but it is very rarely used in Physick at present, unless other Materials of the like Sort are wanting.

Astacus Fluvialilis, or Cray-Fish, are found in the Rivers: These are the *Oculi Cancræ Offic.* commonly called Grabs-Eyes, are equally the same in Physick: They are Dryers, Absterge, and Discufs: They are of great Use, as well as other testaceous Powders, in the Pleurisy, Asthma, and the Cholick. The Claws likewise of the Sea-Crab are of the same Use.

Tinca, or the Tench, will yield a Glue as strong as that of the *Ichthyocolla*: In the common Way of preparing it for the Table by boyling, the Liquor will become a Jelly as soon as it cools: It is held to be good for Consumptive People, and such as are troubled with any Ulceration in the Kidneys.

Monoceros sive Unicornu, or Unicorn: It is pretended that there are four Sorts of it: The first they call *Lupus Marinus*, according to *Gesner* and *Bellonius*; the second, *Afinus Indicus Monoceros*; the third, *Monoceros Equi Figurâ vulgo pictus*; the fourth,
Rbi-

Rhinoceros. As for the first, we have the Horn, which is commonly seen in the Cabinets of the Curious; from that, and not from the Painters Monster, which is figured like a Horse, with a single Horn projecting from its *Forehead*, for there is no such Creature. The Horn of this Sea-Wolf is twisted, and in every Respect like Ivory, and of the same Use. What we call the *Rhinoceros*, is a Quadruped covered with Scales, and has a small Horn growing upon its Snout, but is of no Use in Physick. The Story of that Unicorn which the Painters generally give us, is fabulous, *viz.* That it used to dip its Horn in the Waters of *Africa*, where it was said to live, before any Animal would drink; and moreover that in whatsoever Water that Horn was put, all Venom or Poison was immediately discharged; but this I take to be like other of the *Egyptian* Charms. Some Authors will have it that it is Sudorifick, Alexipharmack, or Cordial; but it is not now prescribed.

Ceta-

Cetus sive Orca, or the Spermaſity Whale: This we find about *Greenland*, and in the Northern Seas; if I may take the Credit of Mr. *Petiver*, who was a diligent Searcher after Curioſities of this Kind; he has ſhewed me, that all the Whales which produce Parmaſity or Spermaſity, were Males, and that the others which did not were Females. This Fiſh however, whether it be Male or Female, is thought to be the largeſt Creature in the World, ſome of them meaſuring ſixty Foot in Length; and it is remarkable, that they couple ſomewhat like Animals on the Land: The Penis of the Whale full grown, is commonly about ſix or ſeven Feet in Length.

The Parmaſity is given in Catarrhs, and other Diſtempers of the Lungs; 'tis ſaid likewise to be Anodyne. 'Tis applied alſo outwardly for ſoftning the Skin.

De AVIBUS, &c.

C*Ygnus*, or the Swan, attenuates, and is of Use in Hæmorrhages, and is likewise said by *Schroder* to purge the Eyes.

Hirundo, or the Swallow, is used in the Shops chiefly to make that Oil, which we call Oil of Swallows. 'Tis recommended in Bruises, Aches, Sprains, and Weakness of the Nerves; but the Shops at present furnish more efficacious Remedies, and therefore 'tis little called for, unless by the Farriers.

Passer Troglodytes, or the Wren, is the smallest and briskest Bird we have in *Europe*. The Use of it is recommended as Diuretick, and not only to dissolve, but to discharge the Stone; but it is seldom writ for: However, as I have Occasion to mention this Bird, I cannot forbear reciting a Story of it, which many of our Modern Authors seem to confirm, and especially some of the Gentlemen of the Royal Academy

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demy at *Paris*. They tell us that if we put a Wren upon a Wooden Spit made of Hazel, and lay it upon two Bricks before the Fire, the Wren will turn round till 'tis roasted enough: This is what was affirmed to me by several Gentlemen abroad, but is what I have never tried.

Corvus, or the Raven: The Blood of this Bird, as well as the *Stercus*, the Brains and Feathers have been heretofore used: The Feathers chiefly in the Epilepsie being burnt; and at this Day, Feathers of the most kind of large Fowls and Birds burnt and fumigated under the Nose of such as have Hysterick or convulsive Fits, are said to have a good Effect; but the Physicians give little Encouragement to such Practice; and we may say that any Thing fumigated in this Manner, which will yield a pungent Vapor, will have the same Effect.

It is said that the Blood will change Hair black; but this I have not tried.

The *Stercus* or Dung, according to *Schroder*, eases Pain in the Teeth, and the Cough

Cough in Children, being hung about their Neck.

The Brain of this Bird has likewise been commended to be good in Epileptick Cases.

Pavo, or the Peacock, is very little used with us in Medicine, but in Diet excels the Partridge or Pheasant.

Physicians now and then prescribe the *Stercus* or Dung of this Creature in Vertigo's and Epilepsies, being well dried, pulverized, and steeped in Wine.

Columba, or the Pigeon or Dove, is seldom recommended by any Physician; but to apply it warm and Bleeding to the Bottoms of the Feet to such Persons as are troubled with the Gout, Vertigo, and Palsie, where it proves of good Use: There is no Bird abounds so much in Blood of its Bigness as the Pigeon; and it may be, that the Help it gives to the Patient, when we apply it in this Manner, is because that the Pores of the Body, where it is applied, will more readily receive its Virtues than any other, and also because we apply it warm.

More-

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Moreover, the Pigeon being one of the hottest Birds in its Degree, there may be more Warmth in the Blood of that, than in the Blood of any other. As for the *Turtur*, or Turtle-Dove, or *Palumbus*, or Ring-Dove, they have the same Virtues as the Pigeon.

Noctua, or the Owl, has been commended in Paralytick Disorders, the Flesh especially. The late famous Doctor *Compton* Bishop of *London*, used to eat them frequently; the Flesh is likewise said to be a good Remedy for the Vapors, or Melancholy: But no Part of this is used in the Shops at present.

Serpens, or the Snake, has been formerly of some Use in the Shops, but is now quite abandoned; tho' the Eggs are sometimes brought there: If we would believe all that *Schroder* says of it, it would be as good as the Viper: But all that I know of its Virtue worth Notice, is that in the South Parts of *France*, the Flesh of them is eaten, and is not much unlike that of an Eel, excepting that it is not quite so viscous.

Vipera,

Vipera, the Viper or Adder, has been often mistaken for the Snake, whereby many People have suffered by its Bite: The Snake on one Hand is not venomous; but the Viper is so dangerous in its Bite, that without immediate Help, the Person who is bit is presently in Hazard of his Life. The best Remedy for the Bite of a Viper is to apply red hot Tinder to the Wound, and let it remain there till a Blister is raised. The Viper-Catchers in *Essex*, *Surry*, and many other Places where they abound, always carry Tinder-Boxes about them, as a ready Help, if they happen to be bit by a Viper: Some others use the Fat of Vipers to apply to the Wound; but the Fire is much the best.

I have observed before, in my Account of the Eel, that the Flesh of the Viper was a great Strengtheners of the Nerves, a good Diuretick and Diaphoretick: It is used now as a Diet among many People of a high Taste, and is accounted a great Restorative.

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The Salt of Vipers is an extraordinary Medicine in the most inveterate Pox, and we have some who distil a Water, which they call Viper-Water, which is sold at a great Price, which is sometimes given to such as are troubled with the Hypochondriack Passion.

Lacertus, or the Lizard, has been sometimes used instead of the Scink, and is generally allowed to possess Virtues somewhat like it; and in that Composition of *Mithridates* King of *Pontus*, as we have it now-a-Days, the Lizard is generally the Basis. It is accounted a Counter-Poison, and some of the *Italian* Physicians pretend where the true Scink is used in the Composition of *Mithridate*, a Dose of it will discharge any Poison, let it be never so violent.

Salamandra, or the Salamander, is of the Form of a Lizard, black, spotted with yellow, and is amphibious. The common Story that we have of the Salamander being bred and living in Fire, is fabulous, and may be placed among the *Egyptian* Curiosities. What we know of that is, that it carries

carries nearly the same Virtues with Scink, but they are very scarce, and rarely found even in the Cabinets of the Curious, and never used in the Shops.

Testudo Marina Offic. or the Sea-Tortoise or Turtle: The Meat of it is very pleasant and nourishing: It is likewise a great Cleanser of the Blood: It is even said to cure the Pox, without the Assistance of any other Remedy. The Priapus of this Creature is accounted in *Barbadoes* extraordinary in Nephritick Pains.

Bufo, or the Toad, is dried in the Air, and is then supposed good for stopping violent Bleedings, by being sowed in a Piece of Silk, and hung at the Breast: But I doubt there is little more in this than in the other Charms we mentioned before, for 'tis not prescribed by the Physicians.

Asinus, or the Ass: The Milk of this Creature is very nourishing, and absterges powerfully: It is therefore useful in the Phthisick, and in Consumptions. It is said that the *Stercus* will stop Blood. Great

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Virtues

Virtues have been attributed to the Milk of this Creature, and is highly esteemed in Hecticks, being a great Restorative.

Caper Off. or the Goat. The Male is called *Hircus*, and the Female *Capra*; the chief Use this Creature is of in Medicine is to strengthen Consumptive People by its Milk, and help those afflicted with the Gravel or Stone by its Blood; which last we find dried in the Shops now and then, but it is seldom now prescribed; the Milk however is often given.

Cervus, or the Hart or Stag, is useful to us in Physick; the Horns first being sliced or shaved, and boiled in any Liquid produces a strong Jelly, which is judged to be a great Restorative, and often recommended by the Physicians to Consumptive People, and is also helpful in the Gravel or Stone: The Bone which is found in the Heart of the Stag, has formerly been commended in Epileptick Cases, and to regulate the too powerful acid in the Stomach: 'Tis a Diuretick and Diaphoretick. We find a Bone
much

much of the same Sort in the Heart of an Ox, which has the same Effect. In short, this may be used in any Case, being finely pulverized, where the testaceous Powders are used; but is seldom called for in the Shops.

The *Hippopotamus*, or River-Horse, or Sea-Cow, or River-Cow, is a large Creature about the Size of a Bull. It is frequently found in the River *Nile*, and other such large Rivers: 'Tis Amphibious, and much of the Shape of the Rhinoceros, but not scaled as that is. There is one of them stuffed and well preserved in the *Museum* at the Physick Garden at *Leyden*: Its Tusks are very large, and of the same Nature as Ivory; sometimes they measure about a Foot and a half in Length. They have one on each Side in the under and upper Jaw. They feed when the Waters are low, at the Bottom of Rivers upon the Weeds there; and in the Time of the Overflowings of the *Nile*, they are in the upper Grounds. The Penis of this is Bo-

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ny, and by being rasped and boiled in any Liquid, 'till the Liquid becomes viscous, is said to be good in Cases of the Stone and Gravel. 'Tis used sometimes in Foreign Countries, but very seldom with us.



I have



Have now Gentlemen, gone through what I at first propos'd in these Lectures, *viz.* to describe such Earths, Minerals, Metals and precious Stones, as are and have been famous for their Use in Physick. In the next Place I have treated of such Roots, Barks, Woods, Seeds, Gums, and other Parts of Plants as are now most esteem'd in the Shops; and Thirdly, have explained to you the Use of such Insects, Fish, Shells, Birds and Beasts, as are most esteem'd in Medicine. What remains for me to say, is concerning Mineral Waters, and their Use: But I shall first observe, when we use Water as a Vehicle, it ought to be as simple as possible, and therefore Rain-Water is chiefly commended: But I conceive that Rain-Water abounds in such Mineral Parts, as are extracted from those Bodies of Earth, where Minerals are found, and are

evaporated by the Sun's Heat, and mixed with the Air, of which the Clouds are composed.

The *Effluvia* arising from Bodies of Earth that abound in Sulphurs, will certainly partake of those Sulphurs; so where Allum is found, the Air sensibly tastes of it; and where there are Salt Springs, the Air in misty Weather will be Salt.

Likewise where Minerals of several Sorts abound, the Showers collected from such Parts will partake of the Virtue of the Minerals; so that Rain-Water can hardly be said to be Simple Water, unless we filtre it, or extract the Mineral, Metallick, Sulphurous, and Saline Parts from it, which may be done in some Measure by Filtration; especially by passing it through Bowls made of a soft Stone which is brought to us from the *Canaries*, as likewise from *Spain* and *Portugal*, which is nearly of the same Kind with the soft Stone which we find plentifully in *Oxfordshire*, and which I have used on this Occasion so much to my Satisfaction,

tisfaction, that I prefer the *Oxfordshire* Stone to that which is brought to us from the *Canaries*.

An Instance of this is from an Experiment that I made about two Years ago with a Water which seemed to abound in Sulphur, and was put into the the *Canary Stone Vessel*, filtred much sooner than that which was put into a Vessel made of the *Oxfordshire* Stone.

A Gallon of Water filtred through the first, produced two Drachms of Salt, where a Gallon of the other did not produce half a Drachm; by which it appears that the *Oxfordshire* Stone suffered less of the Sulphur to pass, and therefore what was filtrated was more pure than the other.

And if we examine all the Mineral Waters that we have in Esteem, we shall find them to depend more or less upon the Mineral Bodies they pass through, and therefore have different Effects; and it is to be imagined that whenever a Mineral

Water gets Credit or Fame in any Country, there will not be wanting some Quack or other to imitate it, and send his adulterated Water into the World as genuine. However, these Waters may be corrected by Filtration, and become pure by passing them many Times through such Stone Vessels as I have mentioned above; so that Fountain Water so often directed by the Physicians, is not always so pure as they would have it.

Most of the Waters passing through Metals are Diuretick, such as those of *Tunbridge* in *Kent*, *Astrop* in *Northamptonshire*, *Nasborough* and *Scarborough* in *Yorkshire*.

The Saline or Cathartick, are those of *Epsom* in *Surry*, *Barnet* in *Middlesex*, *North-Hall* in *Hertfordshire*, *Stretbam* and *Dulwich* in *Surry*, and *Aston* in *Middlesex*.

The Waters that abound in Sulphur are those at the *Bath* in *Somersetshire*, and *Pouxtop* in *Derbyshire*.

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We have likewise some Spaws of great Repute in *England*, which tho' they are offensive to the Smell, yet are extraordinary in all Scrophulous Cases, as well by taking them inwardly, as bathing in them: These Spaws abound more in Iron than in Sulphur, and have some Salt mixed with them. There is a very remarkable one of this Sort at *Mitcham* in *Surry*, in a Gentleman's Garden, which indicates to us, that there is both Iron, Sulphur and Salt which the Spring passes through: This commonly proves Emetick to those who take it, and has even cured the Evil and the Leprosy, besides many Hundred of the Itch. The Reason why I affirm that it depends upon Salt, Sulphur and Iron, is from many Experiments that have been made by my self, and others, concerning Earthquakes; and we find that when these Mixtures are put together, they always produce the like Scent, and the like Virtue Water after is poured upon them.

The *Bath Waters*, which are so good in Scrophulous Cases, is chiefly owing to the Sulphur

Sulphur and Iron Veins it passes through; and according to Mr. *Tournefort's* Observations on the Island of *Milo* in the *Archipelago*, Mount *Ætna*, and Mount *Vesuvius*, they all have their Heat from the Mixture of Iron and Sulphur found by digging in the Ground about them, and the Experiment of making an artificial Earthquake with these Ingredients plainly shews it.

All Waters are therefore governed in their Virtues by the several Minerals or *Strata* of Earth which they pass thro'.

So the different Virtues in the Air of several Places proceeds from the Minerals or Metallick Bodies respectively at each Place, which emit their *Effluvia* that mix with the common or more simple Air; and therefore different Places are appointed by the Physicians for Persons afflicted with different Maladies.

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